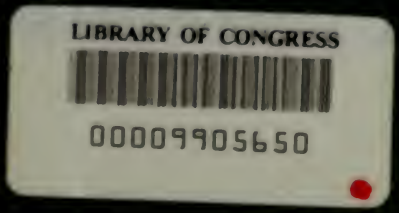
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WOMAN AND HEALTH

A

MOTHER'S HYGIENIC HAND BOOK

AND

DAUGHTER'S COUNSELOR AND GUIDE TO THE ATTAINMENT OF TRUE WOMANHOOD THROUGH OBEDIENCE TO THE DIVINE LAWS OF WOMAN NATURE, INCLUDING SPECIFIC DIRECTIONS FOR THE TREATMENT AND CURE OF ACUTE AND CHRONIC AILMENTS.

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BY

M. AUGUSTA FAIRCHILD, M. D.

AUTHOR OF "HOW TO BE WELL."

"It is time to be true,
It is time to be finding the thing you can do;
It is time to put by the dream and the sigh,
And work for the cause that is holy and high."

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1890:
PUBLISHED BY THE AUTHOR
DR. FAIRCHILD'S HEALTHERY, 537 BROADWAY, QUINCY, ILL.

PRINTED BY J. W. FRANKS & SONS,
PEORIA, ILL.

Entered according to Act of Congress, in the year 1890, by
M. AUGUSTA FAIRCHILD, M. D.,
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INTRODUCTORY.

My Dear, Awakened Woman:

You whose feet tread the grand highway of labor, severe and protracted, of difficulties, opposition, and detraction: do you realize that there is a Power who makes for Righteousness, and who gives Perception and Courage and good military judgment to those who are adequate to His work?

And that the "roused legionaries of that Power find the old fortresses and the new fortifications of error are not impregnable to the shot and shell of Truth?"

To-day the heavens are eagerly seeking to become manifest in humanity, and under the light and warmth of such Divine pressure even strongly enthroned evils cannot last long.

"The night accumulates upon them, and the cold is strongest, and their victims are weakest, and they beat their blackest against the dawn. And the swift dawn comes, but not for them."

Thirty years of medical practice, coupled with constant toil for the development of woman in all departments of her nature, have not failed to bring a quickness of discernment which beholds in the globe-encircling, banded womanhood of to-day a demonstration of the meaning of Universal Motherhood, that overflowing love which reaches to all, and is happiest when most diffused, like God's own love.

What a stirring vision of this New Age do the W. C. T. U. and other kindred organizations present. The dawn surely

does come to *them* and their work. It is as though woman cannot escape her God-appointed destiny. *She will therefore fulfill it.*

"Now understand me well. It is provided in the essence of things that from any fruition of success, no matter what, shall come forth something to make a greater struggle necessary."

And so this book is written. It is to meet developed woman's need. She finds herself thrown, by the soul-wave now sweeping over our race, high up into positions of responsibility never before occupied by woman, and for which her past training "as an upper servant or a toy" gives poor fitness; she sees the struggle necessary, and yet knows not which way to turn.

Body deformed, weakened, badly nourished, vilely clad, cruelly tortured with poison and the knife, mind blindly groping after truths it does not recognize when seen, soul developed into an intuition which *feels* its truths and almost tears mind and body in pieces, in the effort to get expression; all share the "common fate," because "the old which is passing away will not be found equal to the demands of the new, for these are different. Human development means *organic fitness* for all things new; so the furnishing of true light, and the example of devoted lives, are the conditions" under which developed womanhood can flourish. This, I believe, is the Christ-Ideal. Every woman who acquaints herself with the truths founded in nature, who learns and lives the lessons of a high and beautiful life, becomes a divinely-appointed teacher and liberator of the imprisoned and oppressed. She will win

> "A joyous insight of the sun."
> Such women will not selfishly choose
> "Calm breasts, mute lips, and labor shun,"
> But "Give their liberal hearts
> To make the world one harmony—
> Resigned that they be spent
> To such world's help."

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Errata.

Page 139. "Colds—Acute Catarrh" should have been on page 138, immediately following the first three lines on top. Then what is now on page 138, under the head of *Doctor*. Following this, all of page 140. Then turn to page 138 for Treatment.

Page 197. For *sleeping body*, read *sleeping baby*.

WOMAN AND HEALTH

WOMAN AND HEALTH.

CHAPTER I.

MATERNITY WOMAN'S HIGHEST USE.

"Stately, solemn, sad, withdrawn, baffled, mad, turbulent, feeble, dissatisfied,
Desperate, proud, fond, sick, accepted by men, rejected by men,
They go! they go! I know that they go; but I know not where they go;
But I know that they go toward the best — toward something great.
. . . . . .
Tumbling on steadily, nothing dreading,
Sunshine, storm, cold, heat, forever withstanding, passing, carrying,
The soul's realization and determination still inheriting,
Swift, glad, content, unbereaved, nothing losing,
Of all able and ready at any time to give strict account;
The divine ship sails the divine sea for you."

"POWERS in themselves are rights — a thing is not required where there is no natural power for meeting the command to do. The rights of any living being are invested in the whole constitution, and may there be correctly read. The fish has rights compatible with its ability to swim, the bird to fly, the ox to eat grass, and so on throughout the whole animal kingdom up to man, and, strange to say, Man has Rights; and the question of Rights settles itself in the true statement of Capacities. What rights has the fish compared with the bird, the bird with the ox, the ox with man? If the Capacities are fewer, the Rights are fewer. If in Woman are united the greatest number of Capacities, it must follow that she possesses *all* the rights of any living creature upon the earth. Woman's Capacities, then, are man's, and therefore she is the natural possessor of every right which is his. Her practical Rights, those which characterize her as *Woman*, will be those springing from her feminine capacities of both body and mind, for these were given her that she might become developed Womanly,— not as Man.

"There are two human spheres of action,—the Masculine and the Feminine. The difference between the Male and Female structure is in points which affect the capacity for physical action. Nature unequivocally points to Woman as a material producer only in a very high sense, that of being an *inspiration* to the more rugged physical efficiency of Man, *the* producer. It is plainly shown why Man is lord of the external, also why Woman cannot share his sovereignty except as an inferior. Why should she try to ignore the claims of her own nature and covet his sphere? Nature abhors Woman as competitor of Man in action upon the material world, and she cannot escape the truth of her own nature by willing or acting in violation of it."

"It is no mean kingdom to which Man is appointed." Productive work, which is eminently his, is the substantial foundation of social as well as individual improvement. Human action upon the material world is a mighty problem, and required the brain of man to solve theoretically, and his rugged body, resolute arm, and imperative will to reduce to practical solution in labor and the useful arts.

Man is conscious of his power in his own dominion; he knows himself adequate and efficient in obtaining victory and holding rule. There is nothing *unnatural*, then, in the treatment Woman receives as a subordinate in all the fields where Man belongs; but it is mean and selfish to take advantage of her comparative feebleness and make it a means of her oppression, and even slavery, when that very fact ought to claim for her the highest freedom.

But there is a world for Woman as much suited to her capacities as Man's world to his, and there she is equally as much needed: it is the HOME! "Woman's true industrial sphere is the home, and her function is wisely, economically, artistically to use what Man gains and provides. I know how narrow this sphere of action has seemed to many thousands of most noble women, especially to those of the present day, looking beyond it more clearly, firmly, and bravely than any who have preceded them. But I venture to suggest that it has seemed small only because its full dimensions were not seen. She asks for a place outside of it only because she does not yet understand herself

or her offices in it. It is the unfolding of the inner faculties that converts narrowness to breadth, a prison to a palace, and lets the light of heaven come freely into the expanded soul. When this experience comes to woman home is a dear, coveted, cherished place of rest to her. She will never find it narrow again or stinted in opportunity. It now demands of her all that her mind can plan, more than her executive faculties can accomplish. She wonders how she ever thought that insufficient which now is so much, duties to be mean which now are glorified, results poor which now have such richness of character. Could she now desire to go out and labor with Man, share his business schemes, strive for place or fortune with him, or look with envy upon his opportunities? Impossible!" "How grand, how sweet, how harmonious with her whole nature,—nay, how entirely fortunate she now finds her womanly position!" Its separateness and quietness are among its best privileges. For it is only here with them that she can be what she must be, do what she must do to fulfill her great mission to humanity.

"These are what have been prepared for her from the beginning, the wise, divine, essential conditions of success to her. She is shocked and startled to find how near she was to disclaiming them, and thus putting away her most sacred, inalienable right. Exchange this for the right to mingle in that noise and strife, pomp and bluster? Not for the universe!"

"Here at last is a kingdom under a peaceful sovereignty. If its visible bounds are the walls of a home, whether grand or mean, so much the better, so much the more dear to the Woman-Soul, which craves this inner theater the more the more it becomes conscious of itself, its powers and privileges. And home is scarcely home until this peace comes into it from heaven through the mediator — Woman!"

And now we will turn to woman's exclusive sphere of action. First, we learn that Function belongs more to the material, and Use to the spiritual phase of life. Function is masculine, Use is feminine. Woman's crowning work is maternity, and nature enthrones her in that kingdom. But she has not *actually* been crowned sovereign in the kingdom of Use, for Man has, in the order of development, taken precedence

through his foundational work, which was needful to be done for the development of woman's higher kingdom.

"Maternity may be merely functional,—the birth of matter, not of spirit. The maternal soul does not co-work with the maternal body. And, in some stages of human progress, this is in harmony with the needs of the time. What was required of woman, as of the gentle, serviceable animals, was that she should bear children, and the more abundantly the more was she honored. And the race is not yet made womanly, only human ; not Useful, but only Functional."

The Woman-Nature has never found its ample and satisfying sphere of action anywhere in Man's dominions, and cannot. The place or action which can afford her attributes full play must be an interior one. Nature will open her kingdom to her and crown her *in* it, since she did create her *for* it. It will not be in spite of man, but by his ready help.

The consciousness of power must be, and *is*, a condition of that maternity which is not simply functional, but artistic. And this may be the possession of any woman, for nature endows her with capacity to make it possible. Woman must know her own power in this the sovereign work of the race, just as much as any being of whom Use is demanded, whether that be high or low.

Freedom in its performance must also be secured to her. It is her right—*Freedom to choose the times when her maternity shall be performed.*

This will impress even the superficial woman with a sense of responsibility in the office when she has chosen it. When there is not a chosen performance,—it may be that social dissipation and luxury stand in the way,—this sense of responsibility is not felt ; and where Woman is obliged to labor in occupations unnatural to her, maternity coming in spite of her choice is a calamity which outweighs sickness and death.

For imagine, if you can, the effect of such *creative* influences as are the mother's. To a woman even very undeveloped, maternity may come with choice, and her highest sense of obligation is appealed to, the very best traits of her nature brought into play, while the same woman in a forced maternity, would feel herself rightly injured, and maintain a most deplorable state of mind and feeling.

Woman may, in free

CHOSEN MATERNITY,

select and control influences and circumstances so as to bring about the highest results.

What an influence there is in books, friends, travel, social relations,—all that stimulates the intellect and imagination! Maternity in its best estate must not only be free, but purposeful -- intelligent. Purposed maternity means, not the "mere purpose of satisfying the maternal instinct, which the quadruped feels and acts from, as well as the human, but the intelligent, artistic purpose to act in harmony with nature in producing the most perfect being which the powers and resources employed can bring forth."

Given such a purpose, she will live in the sunshine of interior peace and victory, though without may be only conflict and apparent defeat. The inheritance of such a birth cannot be weighed against any earthly advantages in estimating the elements for a human career. The treasure of East and West massed into one shining globe would go to the beam in the balance.

Is it objected that few mothers are capable of endowing their children with this priceless legacy? It may be answered that few women yet know that divine phenomenon, "Womanhood!"

"The Womanhood of Woman equally lies in the development of her spiritual into confirmed permanent ascendency over the other elements of her nature, and, consequently, into that fine sovereignty over man and the human life, which, in one form or another, it is her prayer to get, and the prayer of society that she should get. In the light of these truths we see why youth is the masculine period of human life. It is yet in germ, imperfect therefore ; has its life in, and chief appeal to, the senses. It is also plain why the middle period, that of corporeal fruitfulness, or personal Motherhood, unites masculine and feminine elements in a more even balance than they held in youth, the appeal being to the purer, more refined and less passional love of Man ; and why the post-maternal period, that of Universal Motherhood, is pre-eminently the feminine one.

"Womanhood cannot be known till it is studied and lived beyond these portals which have heretofore closed to shut it, in coldness and darkness, out from the shining circle of human sympathies.

THE SPIRITUAL IS THE CREATIVE POWER

in man or woman. It is this by virtue of its oneness with the Great Artist and Creator. It never lacks resource, is not daunted by any array of circumstances, knows no despair, sees no failure; knows that failure is impossible, because its aims are one with the Divine aims, which cannot fail."

When Motherhood is prized as the choicest of life's opportunities for faithfulness and devotion, its fruits will correspond to its own high character, and society will bear its stamp as it now bears the inferior one of its ignorance, selfishness, sickness, and poverty.

"When every knowledge and all orders of capacity are advanced to rank among the means to this divinest of Ends, then Maternity will honor God and Humanity, and its fruit will be social peace, purity, and harmony."

Viola: "With perfect benediction of pure love," the Christ seems to say:

"Then at last
I, wrapping round me your humanity,
Which being sustained, shall neither break nor burn
Beneath the fire of God-head, will tread earth
And ransom you and it, and set strong peace
Betwixt you and its creatures.
In my brow of kingly whiteness, shall be crowned anew
Your dis-crowned human nature.

"Look on me!
As I shall be uplifted on a cross
In darkness of eclipse and anguish dread,
So shall I lift up in my pierced hands,
Not into dark, but light — not unto death,
But life, beyond the reach of guilt and grief
The whole creation. Henceforth in my name
Take courage, O thou woman — man, take hope!
And thence with constant prayers
Fasten your souls so high, that constantly
The smile of your heroic cheer may float
Above the floods of earthly agonies,
Purification being the joy of pain."

The ideal Woman finds Home to be her Queendom, Motherhood her highest Use.

Doctor: Laws and influences governing the production of this Mother-Art in Maternity will now engage our thoughtful attention. A. E. Newton, in a valuable pamphlet on Pre-Natal Culture, has brought us greatly in his debt, having given some extremely useful and practical thoughts, which, so far as I know, are not found elsewhere. In regard to the law of *embryotic moulding*, Dr. Brittan is quoted as saying, "The singular effects produced on the unborn child by the sudden mental emotions of the mother are remarkable examples of a kind of

ELECTROTYPING

on the sensitive surfaces of living forms. It is doubtless true that the mind's action in such cases may increase or diminish the molecular deposits in the several portions of the system. The precise place which each separate particle assumes in the organic structure may be determined by the influence of thought or feeling. If, for example, there exists in the mother any unusual tendency of the vital forces to the *brain* at the critical period, there will be a similar cerebral development and activity in the offspring." As the electrotyping process may not be familiar to every one, it is here described. It consists in causing, by means of electrical agency, the deposit of fine particles of metal — gold, silver, or copper — dissolved in a powerful acid, upon the surface of any article which it is desired should receive a coating of such metal. It is reasonable to suppose that by a somewhat similar process, effected by the vital forces of the mother, and to some extent controlled by her mental operations and emotions are deposited the molecules of matter which go to form the human embryo in all its various parts.

It has been suggested that "mother's marks" result from a concentration of nervous force, by the touch of the mother's hand upon some part of her own person while under mental excitement from some specific cause, and it appears confirmatory of the above stated theory. It would be easy to fill a volume of testimonies illustrative of this theory, and such facts seem to establish beyond question that the mother has it largely in her power, *by the use of suitable means* to confer upon her child *tendencies of mind and even conformation of brain.* If

this be true in respect to intellectual abilities and physical features, it must be equally true in regard to moral dispositions and spiritual tendencies. That the

MOULDING POWER

on the part of mothers can doubtless, if *purposely used* with *enlightened intention*, produce very perfect results, who can doubt?

According to what we have learned, an intentional direction of the vital or mental forces to any particular portion of the brain will cause a corresponding activity and development in that portion of the brain of the offspring.

Phrenology teaches that the brain is made up of a congeries of organs, which are instruments of distinct faculties of the mind or soul, hence, if the mother during gestation maintains a special activity of any one organ, or group of organs, in her brain, she thereby causes a more full development of the corresponding organs in the brain of the fetus, and thus determines a tendency to special activity of the faculties of which such organs are the instruments in the child.

It is then clearly within the bounds of possibility that a mother, by pursuing a *systematic and comprehensive method*, may give a well-rounded and harmoniously developed organism to her child. Suppose one objects to the phrenological theory. It is still true that our minds or souls possess powers or faculties in some sense distinct, and the above evidence still holds good.

In view of these facts the importance of *culture before birth* exceeds that which pertains to all other departments of education. That which has been the *last*, and held in the least estimation, will be the first. "The last shall be first."

Viola: May not this process of embryo development by and through the action of the vital, mental, and spiritual forces of the mother acting in and through the corresponding forces of her own organism go forth unconsciously, or without the mother's voluntary participation or direction?

Doctor: True. But the results are chance-determined and uncertain. The importance of system is as great here as in post-natal culture. "If it be left to the ordinary action of the laws of heredity, as is usually the case, what else can be

expected than that paternal or ancestral traits, good or bad, with now and then an erratic variation, desirable or undesirable, will preponderate in the child?"

Viola: What an impressive lesson. And it looks to me that a whole lifetime would not be too long a period in which to prepare for so important an undertaking as motherhood assumes. Why not

INSTRUCT ALL YOUNG GIRLS

and boys, too, in the momentous possibilities of their future, as influencing for good or bad the coming race? It seems to me that no stronger motive for self-improvement, self-discipline, and tenacious purity of life could be presented. The honor pertaining to this office is God-like, and its sacredness not equalled by anything in the whole line of human action and endowment. If children have rights, and they have, as well as other beings, the very first would be the right to be well-born. *Every department* of the life must be prepared for the august responsibilities assumed by those who are to endow an immortal for its earth-experiences.

Doctor: Surely this self-culture is not the work of a day or a year, and I believe the earlier the young of both sexes can be properly instructed, and impressed with the importance of living for those who may come after them, the better will they become fitted for this highest responsibility. If it be true that "like begets like," it would follow "that the taint of physical disease, of mental unsoundness, or of moral obliquity, which lurks in the system of either parent, is liable (perhaps not always certain) to be infused into the germ, and thus to be reproduced after its kind." On the other hand, "when once the spiritual selfhood has been born into consciousness, it tends to become the ruling power in us, and in proportion as its divine promptings are heeded, it will overcome and remove all the evils and impurities of the animal or selfish nature."

Viola: Would not, then, the offspring of truly regenerate parents be expected to be "regenerate from the womb," their spiritual natures so

by the activity of the spiritual forces in the parents, that, if properly nurtured subsequently, the spiritual in them will assume the supremacy from infancy and maintain it through life?

Doctor: Yes. Such children I have seen. They are "born of the spirit" at the outset, and not merely "of the flesh."

Viola: But it will be asked, "Are there reasonable grounds for hoping that parents in general, physically diseased and morally imperfect as they are, may, by any process of self-culture or of spiritual regeneration, attain to such a state as that they shall not transmit physical diseases or moral obliquities to their children? Can the chief obstacles to such preparatory culture as has been here recommended be so regulated by any means as to admit of this culture?"

Doctor: The answer may be called, indeed, "a hard saying" by those who are held in the bonds of the fascinating power of physical appetites, but encouragement comes with the *truth of being*, which, in the name and by the power of Christ, sets the prisoner free. There is, indeed, hope for all, based upon the laws of our own organism. Says Hiram E. Butler, in the *Esoteric*, "There are two laws of generation, the one in the procreation of children, the other that of the regeneration of one's self; but habit is such that this function is not content with what would be considered its natural use. And physiologists have presumed to encourage this unnatural waste, on the ground that it was necessary to the health of the body. But ask physiologists if celibate animals do not absorb this vital principle and physically profit thereby? Was not that the method of all the great masters of antiquity? Was this not the secret of their greatness? Certainly it was. It has been demonstrated in all ages by the few who became masters over themselves and the forces of nature." "Consider that you have an animal body that you must subdue and control in perfect harmony with the laws of its pure nature. It is also a chemical laboratory, of which you are, or should be, the master workman. The thing to be done, then, is to keep every function of the body in good working order. Carry out the thought of

and deal with the body as with any good animal; supply suitable food and drink, clothing, etc. The power of man to be what he wills to be lies in his ability to control the senses, appetites, and passions, and not be controlled by them. We want to close all avenues of *waste* for the life essences. The old maxim, 'Life is precious,' is true." Not only does the popular mental science of to-day, in each and all its phases, teach that health and morality are normal to human beings, and disease and evil abnormal, but the laws of life proclaim this truth. It is the constant tendency of health and goodness to overcome disease and badness, the former being in harmony with the great forces of the universe, and the latter antagonistic to them.

Viola: A. E. Newton says, "It has been demonstrated in the scientific propagation of animals that the abnormal characteristics are far less persistent in transmission than are normal ones. The tendency of nature's forces is to maintain the normal type. The same law, doubtless, obtains in the human species. The law that 'like begets like' is thus subject to a modifying principle, and one that is full of hope for suffering humanity. Not alone do the evils of our nature tend to reproduce themselves, but by virtue of this reversion to what is normal, healthful, improving, the goods and excellencies have a still better chance of survival, *provided adverse influences can be kept in abeyance, and that the salutary life-currents of the universe shall be unobstructed.*"

Doctor: "We must cease to nourish the germs of physical disease and moral evil implanted in us by our progenitors, and avoid generating more of the same in ourselves. In other words, we must learn the laws or conditions of physical and moral health, and conform our lives to them." The law of the orderly and natural use of the procreative forces, well understood and obeyed, would preclude the need of uttering such words as the following by Dr. Perrin, as quoted in Dr. Holbrook's "Marriage and Parentage": "The ungoverned passion of man is prolific of evil, and, like producing like, the father who has never learned self-control may give his son

not only form and feature, but the germ of the same fierce, clamorous desire, which, in its full development, will prove a heritage of woe to that son and others. What polite language veils under the designation 'social evil,' and which desolates so many happy homes, and brings its quick, black harvest of misery, remorse, disease, and death, chiefly lives because man does not know aright; does not duly reverence and honor woman, and keep in subjection that which may become one of the monster passions in his heart, and is thus continued from generation to generation. Surely prospective motherhood,— woman, within whom proceeds the evolution of the marvelous mysteries of creation,— should be reverenced as worthy of all thoughtful consideration, and ought to have thrown around her all protective care. The woman who has conceived is *enciente*, in allusion to the ancient custom of laying aside the girdle when pregnant and placing it in the temple of the gods, at once a preparation for the enlargement of the abdomen and a seeking of divine protection. Let her not fail of all human care while in this condition. Nature then offers unto man invitation and opportunity to subordinate passion to reason, to conscience, to will, to a higher love, and thus raise himself above himself. It may be objected that the abstinence here advocated contradicts almost universal practice. As to this objection, no matter how universal a practice is, if it be wrong, at least endeavor to point out the wrong. Whether I judge from observation, from the great doctrine of evolution which so fascinates the age, or from the power of divinely-revealed truth, the conclusion always is, that the world grows better, and that a wiser, happier, nobler generation will one day possess the earth. Each evil pointed out, each wrong discovered, helps the progress to that day, although it may be a long time before the evil and the wrong cease. Meantime, it is a great mistake to accept a popular vote as criterion of wisdom and right. Possibly physicians are too reticent in regard to these matters; do not consider as fully as they ought the connection of these with human health and happiness, and give that instruction to the people which is so much needed. Believing this, I can say in the words of Montaigne: 'I know very well that few will quarrel with the license of my writings who have not more to quarrel with in the license of their own thoughts.'"

Viola: Are not serious consequences liable to result from practices herein disapproved ?

Doctor: Most ungracious disturbances of the whole system. Agonies are borne, torture of nerve and brain and soul. Nature most emphatically condemns the wrong-doing, as is shown by the very large proportion of abortions induced by disregard of law, whether it be from ignorance or willful choice. Fully one-half the miscarriages which come under professional notice can be traced directly to this cause; and it swells enormously the list of maladies from which women suffer.

Viola: Please tell me, is it true that women will sometimes allow their little ones to be murdered during prenatal existence? If so, what a shocking descent of the human down, down into the infernal. I cannot understand the depth of such depravity.

Doctor: I confess with shame for the sex, for the race of human beings, that such wrongs are done, intentionally and knowingly. And the fact, revolting, hideous, horrible, should alarm every enlightened Christian woman into a self-imposed effort to teach and preach and live condemnatory of the crime of abortion. For a crime it is, and always brings fearful retribution sooner or later; the vital system has received a shock from which it will never fully recover. Whether the attempt to produce abortion be successful or not, results are not less disastrous. Suppose the fetus is not dislodged and persists in remaining its full term ; depict if you can the influence of the murderous intent of that mother upon her innocent child ! A case in point : A very bright boy of five years was brought to our Cure. His father, a clergyman, had died shortly before this time. His boy, an only child of the widowed mother, would become furious as a wild animal whenever his mother came into his presence, and she could not by any means in her power appease him. It was a common declaration of his, "I want to kill my mother, *I mean it.*" We found it necessary to keep him away from her for days at a time, as little fellow that he was, he made well planned attempts to take her life. The history of this case revealed instructive facts. It seems that, not wishing that she give birth to a child, these parents had

made various unsuccessful attempts to destroy the fetus, and this was the result of their conduct. Another child I know, that was impelled to *swear* whenever father or mother was present. Of course she was taught the wrong of it, and even when very young she struggled against the temptation, but the impulse often overcame, and she relates that frequently she would run out of the room and seek an obscure place where she gave vent to oaths which fairly chilled her blood. I knew her later as a beautiful young lady; her father died, and she expressed herself as relieved by that event of a cause for almost unequal struggle against the *impulse to kill him*, much as she loved her father. With her mother she was always unhappy, and could not overcome the undaughterly feeling of repulsion. She is now married, and with the lesson of a blighted childhood and girlhood, read from her past, she faithfully, heroically endeavors to shield her own children from such a fate, and not only *her own*, but in the banded Christian work of Woman to-day she wields her influence against the curse which darkened her early years, and actually robbed her of a father's and mother's love.

Viola: Might it not be reasonable to conclude that such causes as you have been considering might be operative in producing the array of horrors which appall us daily as we take up the newspaper and read its columns of criminal news items? Parents, children, brothers, sisters, friends, no one too near or too dearly loved to escape this murderous impetus from the infernals. It is surely born of hell. And yet, acknowledging the destruction of fetal life in the advanced stages of gestation to be evil, many declare that in the very early stages the living germ has no life!

Doctor: I do not believe that *any woman*, in her inmost soul, puts confidence in that which her intuitions declare a falsity. She may resolutely, for reasons known to herself and husband, defy the higher leadings and willfully bend her nature toward the untrue and wrong, but she *always feels it a wrong and a violence.* Even the victim of the seducer, the one in whose circumstances excuse might be found for the perpetration of this crime, if any excuse were possible, shrinks before the seeming necessity of such a measure. Bring her to a knowledge of its

truly bad and only evil nature, and she will bravely go forth determined to live up to her own best mother-intuitions, meet the rebuffs, the scorn, the reproach which her wrong invited, for this is her due, she thinks; but she will not wreck body and soul in the commission of a crime against the innocent unborn, not even at the price of successful concealment.

"She sees clearly for herself:
Her instinct's holy."

Viola: Would not correct teaching upon subjects which have been held in secrecy, especially between mother and daughter, parent and child, establish so pronounced a sentiment favoring holy instinct, that evils which now flow largely from ignorance would be checked, and their extermination made easy?

Doctor: They could not exist in light. Darkness, secrecy, hiding-places favor them. Do not start, I will ask what child, boy or girl, would be capable of such perversion as to form the evil habit of *masturbation*, if right instruction, connected with right living had been built around that soul, a wall of defense against the assaults of hellish spirits? For it is from hell, and leads to hell, and is itself hell. "Strong language?" It is a *strong picture*, that of the army of enslaved ones tramping over the ground already beaten to adamant by the thousands of feet which preceded in the line of march. Consumptions, Nervous Prostrations, Dyspepsias, Epilepsies, Cancers, Scrofulas, Paralyses, besides the whole brood of mental weaknesses and spiritual blindness, spring up from every dark corner of ignorance and false modesty, making havoc with body and soul! Walk any of our streets, go into any public assembly, meet anywhere boys and girls, youths and maidens, men and women, and language will scarcely portray, to the mind that knows the source, the scene of wreck in human life.

This evil has invaded palace and cottage and hovel. Rich, comfortable, and poor, learned, talented, illiterate, all grades of social rank. I do not know how to designate the apathy which mothers exhibit in matters which bear so closely upon the welfare of their children, if I do not call it love of repose. Women are unwilling to cut aloof from the old moorings, and submit to the inconveniences which arise from stirring contest with strongly fortified influences. And so their children are

wronged, because untaught, and disease and death hold high carnival.

Viola : There are many good books written these days, such as Mrs. Shephard's books, "For Boys" and "For Girls;" other philanthropists have enriched their race by similar good productions, as though

> "The noble heart that harbors virtuous thought,
> And is with child of glorious, great intent :
> Can never rest, until it forth have brought
> The eternal brood of glory excellent "

In a paper read by Mrs. Elizabeth Saxon, of Tennessee, before the International Council of Women, at Washington, D. C., 1888, are these words: "The organized womanhood of the world is in the great expanse of boundless freedom in thought and act, if they choose to open their eyes and avail themselves of it, they will find around them a sympathizing and helpful body of men and women hungry for the life-giving truth as they are for freedom from sin and crime." "The hour has come." "We have sowed the wind in ignorance. Only realize what we have been under the conditions of false modesty and ignorance of the divine law of life and its possibilities. I implore you women, old and young, to look back on your own ignorance of all this law of human needs, and realize what is around us and what fruit secrecy has borne. Gather to your very souls the children in loving confidence. Show both sons and daughters the sanctities and the terrors of this awful power of sex, its capacities to bless or curse its owner and the little helpless being in the mother's womb. Teach that the building of character begins in the very hour of conception; that he or she who can give the color of hair, gait, laughter, and looks can bequeath the tainted appetites and low diseases. Teach that the holy thought, the reverent prayer, the dwelling in the kingdom of peace, belongs of right to the mother-builder. The self-sacrifice, the loving sympathy, the mighty upholding of all her nature in this her divine mission, that is the father's duty. Nature furnishes every mother a beautiful lesson for her children. Why forever cram with book-lore to the exclusion of tender counsel on lofty possibilities? Mothers say, 'I can't tell my children these things!' Then

some boy or girl will. Your Bible will betray you. Every child knows that the hen lays her eggs. His nature and his innocence sees no harm in this. Tell him, as you show him the tiny life-germ in the egg as you prepare your food, that here is the unfolded story of creation; show him that in just such shaped and softly-lined rooms all animal life cradles in the mother's body, from its lowly form up to man, walking in God's image on earth. Here every nerve and bone and muscle of the wonderful house God's Spirit dwells in is created, wrought from her life-blood. He is bone of her bone, life of her life, woven into being, with every gift of her body and soul consecrated to his service, with her daily and hourly prayer; sent into life with the pangs of agony that bid her stand in the very shadow of death's wing, that she may cradle him in her arms, and make, for long months, her bosom the cup of his life, the couch of his rest, his refuge in sorrow, his pillow in death."

CHAPTER II.

HELPFUL WORDS FOR MOTHERS.

Doctor: The various subjects bearing upon human life, health, and happiness throughout our studies are so many roads leading to Rome, magnificent city, "set on seven hills." Proud Motherhood! We will adorn you with a garland of fadeless flowers gathered from the garden of Nature's God; present you with gifts of such rare excellence that the wealth of the Indies could not purchase, for what is so immortal as Truth, or so priceless as Health, wholeness of body and soul?

Viola: Let me read you a portion of my morning Bible lesson from Luke 1st:

"My soul doth magnify the Lord,
And my spirit hath rejoiced in God my Saviour.
For He hath regarded the low estate of His handmaiden;
For behold from henceforth all generations shall called me blessed.
For He that is mighty, hath done to me great things;
And holy is His name.
And His mercy is on them that fear Him
From generation to generation.
He hath showed strength with His arm;
He hath scattered the proud in the imagination of their hearts;
He hath put down the mighty from their seat,
And exalted them of low degree."

Doctor: Ah! the voice of Woman sounds to-day the old, new words of the blessed Mary. We will now follow the developed Woman through her divinely commissioned office. She has chosen her fitting time and season conscious of her power in the Mother-Art, and has put her house in readiness for the angel guest. The walls of this physical abiding-place are not weak and tottering, they do not require to be braced up with steel or whalebone, nor ligatured with strong cotton bands; they are strong, need no supports, and insure the safety of the in-dweller. Sources from which food is made will be very

clean and pure, even dainty and nice. "In the blood is the life" of this little invited guest, and so the maternal heart and brain unite in providing materials which will make the best blood to nourish the highest manifestation of life. The golden grains, which represent duties done from the Lord, and the luscious fruits which contain a new assurance that the Lord and the Lord alone is good, are the chosen foods. These marvelous instruments, the nerves, conveyers of impression, take no message that is not in direct harmony with heaven ; no thought of selfishness, hate, envy, pride, or evil in any of its ugly-visaged forms is ever transmitted, but a perpetual influx from the realms of Love and Eternal Good brings tidings of great joy to the little immortal, during its stay in the house which God prepared for it to tarry in a while midway 'twixt heaven and the earth, to make ready for entrance upon that endless journey throughout the eternities.

The natural promptings of the prospective mother will lead her, during the earlier stages, to desire travel, change of scene, visits with friends, and affectionate interchange of thought, as though the heavenly visitor would like to take its first impressions of the world, of which it is soon to become an active member, to take part in struggles and share the crown of victors. Later the impulse seems to come over the spirit of its dream to have provided the wherewithal to clothe that body, which is daily being formed and fashioned so mysteriously. In full sympathy with this suggestion, the loving mother's heart and brain and hands are engaged in the construction of soft, fine garments for the protection of the anticipated new-comer, in freedom and beauty, and every way according to the best interests of its whole being. She studies, plans, and constructs patterns, ever holding in mind the *uses* of clothing, while she lays her love for the beautiful under full contribution to its ornamentation. The plan adopted would be about like the one described in our Dress Chapter. While suitably interested and busy in making the dainty wardrobe, there would not be allowed any vexatious care, or exhaustion of brain and nerve in embroidery, tucks, and rufflings, for the little unappreciative creature thinks it nonsense

"To gild refined gold, to paint the lily,
To throw a perfume on the violet,
To smooth the ice or add another hue
Unto the rainbow, or with taper light,
To seek the beauteous eye of heaven to garnish."

Far better satisfaction is given with the bestowal of a plump, rosy body and happy disposition, than all the finery to be procured, particularly if the mother's vital forces are called out exhaustively, and her health injured, in decorating the wardrobe.

Viola: Please, a few words more as to the diet suitable at this time. What especial directions would you give?

Doctor: The best results to both mother and child will follow upon using a diet of the highest quality, which would be mainly fruits and grains. If animal food is eaten, it should be used but once a day. A variety of grains — unbolted wheaten bread, rye and corn bread, the different grain preparations in well-cooked mushes, eaten very slowly, and vegetables may be used rather sparingly. I know there is a fashion abroad of eating fruits alone, or mainly, and avoiding such articles as tend to make solid tissue. In that way painless childbirth is more nearly approached. It is a good plan, but where there is due regard for right living, in general, that is sufficient without imposing a restriction to very narrow lines. Two meals a day are preferable to three, and if the third meal is taken it must be a very light one. Drink freely of hot water on first rising each morning, also at tea time, and about an hour before the mid-day meal. Lemon juice may be added if liked. *Never eat between meals.* I do not mean, never eat a meal between meal times, but never eat *anything* except at regular meal hours.

Viola: But what in case of "longings?" how may be appeased the craving for articles which are really quite outlandish? Would it not be dangerous to deny their gratification?

Doctor: I would appease such "longings" very much as I would deny the desire to commit theft. Dismiss the thought as an intruder. Assert your own supremacy over desire. Know so well who you are, and what the work before you, that

"longings" and all abnormal states will find no resting place. Treat this as you would any other mental or moral obliquity.

Do Not Pet the Notion

or favor it in any degree. There is no truth in the idea that when a woman is *enciente* she must at all times be liable to all sorts of vagaries, and, lest she "mark the child," yield to them. If Mind-Cure, by whatever name it is called, never did any good beyond this, it is invaluable. The lifting up of the life beyond the plane of natural things, of bodily pleasures and pains, and centering thought upon the spiritual, proportions things rightly, and in good time we are freed from slavish fears, and find ourselves full of the "assurances of hope."

Viola : Motherhood may well rejoice in the consciousness of ability to reach attainments so high that morbid organic cravings will not invade. Every mother should make herself familiar with influences which are uplifting to the whole nature of both herself and the coming one.

Doctor: The dress during this gestative period should be so entirely scientific as to fit the requirements for warmth and protection, and even beauty, without in any degree becoming an impediment to full breath and free circulation and entire freedom of motion. It will be the dress suited to the Woman of the New Age.

Viola: Are there not special hygienic observances for this period suited to those who may not be in the highest health possible to them, but who would bring themselves up to better conditions through observance of proper means?

Doctor: Yes. And the one who realizes the grave responsibility of this undertaking will not fail to appreciate all the help of which she can avail herself. Where the abdominal muscles are weak, a daily routine of self-massage treatment, followed by deep breathing exercise, may be employed. This may be done in the morning, before dressing, if a suitable hour in the forenoon cannot be made available.

The dress must not in any way impede motion, hence, before the night-gown is exchanged for the day clothes, is a good season.

1. Lie flat on the back, extend arms from shoulder, at right angles, with a tension as though in the effort to reach a distant object. Try, as though this were really the case. At the same time stretch the lower limbs toward an imaginary object. Hold in this position and tenseness, long enough to count twenty, slowly.

2. Completely relax every muscle. Fix the eyes upon a point; a piece of white paper pinned on the wall opposite is good ; look at this without even winking, count slowly and see how long you can hold the eyes steadily upon the object, at the same time preserving as complete relaxation as possible.

3. Breathe.

4. Pinch, rub, and press the muscles of the abdomen, stroke deeply and firmly upward, continuing the process about three minutes.

5. Lying on the back extend both legs directly upward, at right angles with the body. Now bend one knee and bring it toward the chest, and extend it forcibly, as though about to hit something "a-swinging in the air." The same with the other leg. Repeat ten times.

6. Knees drawn upward toward the chest, rotate thighs from right to left, and from left to right, five times each way.

7. Extend arms directly upwards. Now stroke one, now the other, upward, with force ; ten times each.

8. Sit on a stool, feet placed firmly on the floor, hands on the hips, rotate the body from right to left, slowly, five times. Reverse five times. In doing this, let the head describe a circle, bend body equally in each direction.

9. Arms hanging down, hands grasping a light weight. Bend *slowly* from side to side as far as possible, each way. Ten times each.

10. Arms still at sides ; bend slowly forward and back, ten times.

11. Rotate the ankles, first one, then the other, from right to left and reverse.

12. Pat the whole surface of the body and limbs vigorously for a few moments, after which, inhale deeply through nostrils, hold the breath, pat the chest while slowly exhaling. Repeat inhalations twice.

It will be observed that no violence is done to even very weak parts. The woman who needs the help which voluntary movements are capable of affording cannot always be safely advised to take them in a standing position for very obvious reasons. Hence, pregnant women are best suited to take the movements as here recommended. It may be best to take only a few of these each day. And the repetition of each may be lessened or increased as circumstances indicate. These movements are useful in developing and giving tone where strength is most needed. During the whole period, passive exercise out of doors, riding, boating, etc., will be extremely beneficial, as also the more active, walking, light work, etc. For the last two or three months wear the diaper pack each night, or nearly every night. The bowels must be kept free. A gill of tepid water taken as enema, to be retained every morning after the bowels perform their diurnal office, is useful, and perhaps the syringe will be called into requisition daily; if so, always take the small cool enema after the bowels have been well cleared by a full warm one.

Sleep much. Retire early, not later than nine o'clock at night, and rise early, that morning's loveliness of air and sky and bird-song may have their elevating influence in turning the thoughts towards that Light which "lighteth every man that cometh into the world."

As the last days come and go, and the longed-for time more nearly approaches, the prepared woman turns to the only Source of Strength, the only Power, with a loving faith which finds expression in these words of the Psalmist:

> "Bless Jehovah, O my soul,
> And forget not all His benefits,
> Who forgiveth all thine iniquities,
> Who healeth all thy diseases;
> Who redeemeth thy life from destruction,
> Who crowneth thee with loving-kindness and tender mercies."

Now the critical day is here. All is peaceful, calm, and *ready*.

As her mind reaches out to the hour of delivery, such a welling up of courage and faith comes over every faculty, that she is enabled to say:

"Though I walk through the valley
Of the shadow of death,
I will fear no evil."

Would that all wives and husbands were relieved from that superstitious dread of an event which is as natural as any other natural function of the body, and attended with as little hazard, under the right conditions.

In the universal spiritual awakening of this day is incorporated a power which will bring about a changed order of thought on this as well as other matters. I look for such a change right speedily as will lead woman to feel a lively amazement that she has borne her sufferings so long, under the mistaken notions of the past.

Viola: Now that knowledge which will save from so much unnecessary pain and fear may be hers, merely for the asking, and its benefits accrue to her through application of what she may learn, and through right modes of thinking and doing, she is her own torturer and executioner whenever the eyes are willfully closed to this light, and the way of escape ignored.

How many, many times have women suffered death during the nine-months period, in mere apprehension of the

Perils of Childbirth.

Doctor: "Perils." How happens it to be attended with perilous consequences? Why not suffer death, as you say, every month when you think of encountering the perils of a natural monthly periodical function? Or, for that matter, why not bid farewell to neighbors and friends, make your will, and prepare to take a step into the unknown, every morning as the hour for a daily periodical function of the bowels arrives? I do hold that Maternity is invested with colossal responsibilities, but *not* perils.

Women die in child-bed; what wonder? The greater marvel is that so many escape, even with the poor excuse of life and health which enables them to drag along through existence more dead than alive.

In the light of what these lessons teach is readily seen the

cause of all this wrong notion which frightens the prospective mother, cries wolf when no wolf is near.

Hold up the straight line of *law*, which rules throughout the spiritual, mental, and natural kingdoms, and see how far the usages of civilized women fall short of reaching this line of rectitude. If they happen to touch at all, it is only in points here and there, and their crookedness is made even more apparent. Perils of the perversity of a crooked generation, will do; but not the perils of natural childbirth. There are none.

Viola: As one can scarcely know too much about the way through which she is to pass — and there are times when professional help cannot be had,— will you give an outline of the conduct of a labor?

Doctor: I will. I just said the critical day is here; the hour is *now* come.

The Premonitory Symptoms of Labor

are easily recognized, and I will not enumerate them. Clear well the bowels at once. Let the water used as enema be as hot as can be borne and very abundant in quantity. After this it is a good plan, if at all convenient, to take a hot sitz-bath of fifteen or twenty minutes, but it is not absolutely necessary. Hot fomentations to the lower abdomen are a means of comfort, if the patient is suited to remain in position to have them applied. Drink freely of hot water. As to position, I would emphasize this fact, that position is greatly influential. And why? The womb is a floating organ, that is, not fixed, bony, and is held suspended by ligaments, which have attachments to parts of the pelvic lining. It is through the pelvic canal the fetus travels on its way to the outer world. Because the womb is capable of becoming misplaced, owing to weakness of its supports and other causes, its mouth may not be found opposite the pelvic opening when labor begins, and hence the effect of contractile pains is to a great extent lost, and suffering uselessly endured. We know it is by contractile effort, made by the walls of the womb, that expulsion of the child takes place. And that sort of effort is made by the intestines and the bladder to rid themselves of their contents

when ready to do so. Now, an improper direction or the expulsive forces, which increases pain and retards delivery, may be overcome simply by change of position. The mouth of the womb may be turned to the right or the left of the front of the pelvic opening ; any degree of obliquity will exert a proportionally aggravating influence. Let me illustrate. I place an apple in this silk work-pocket, and draw the strong elastic cord until the opening is just large enough to let the apple pass through, provided the pocket is held directly "up side down." But I hold it so the apple impinges now on the right side, now on the left, and in any direction it lodges in a sort of sack. So I imitate expulsive effort by drawing the silk tightly around the apple to force it out, yet it lodges and will not escape until a correct readjustment of the pocket is made. If, in addition to the resistance offered by the pocket, the apple is forced against some other unyielding object, matters are more as we find them in case of the opening of the womb being held in more or less degree against the pelvic walls. I do not doubt there are better illustrations than the one just presented, but if this serve the purpose of bringing to the reader a conviction that position in labor is important, and why it is, it will be sufficient. A little intelligence upon these matters will save much unnecessary and avoidable suffering. During the early stages of labor the patient may—yes, *should* — walk about the room, lie down, assume any position she likes, and not hold to any fixed position. When the time arrives, however, for her to choose an attitude for the closing effort, I would recommend one of the two following as being productive of the easiest possible delivery.

The First is the Erect Position,

either standing on the feet near the bedstead, or some object which the hands may grasp, thus giving support and a feeling of ability to sustain the body erect, or kneeling upon a large pillow or folded comfortable, the knees well separated and hands clinging to a support. The naturalness of this position is plain when we consider how universal is the fact of gravitation. Also, that in obedience to natural law, the fruit on a

tree passes through the successive stages of development until a state of ripeness is attained, *when it drops*. The fetus has been aptly named the "fruit of the womb." Will it not obey the same law of gravitation which the apple does under the like circumstances? If there is nothing in the way it surely will, and if there *is* obstruction or impediment, another force comes in, and with persistent, resistless energy almost tears everything to pieces in its way. This is called expulsive effort, and the more it predominates in a labor the more pain is experienced, essential as the effort may be under existing conditions. Now, to approach painless labor, whatever influence position may have should be thrown in the line of the plainest natural forces, and we see how simple and easy it is for a dependent weight to fall, if left to itself, unimpeded. The standing or kneeling position, then, would be first best. Next, the almost universal one, upon the left side, and it is, also, a convenient position. The knees should be held well apart by a roll of bedding, or a large pillow; the body bent forward and knees drawn up. But the back or right side may sometimes be the proper position.

"As the accoucheur, in most cases," says Meigs, "hath little really to do, except to receive and protect the child, and attend to the delivery of the after-birth, it would seem entirely suitable that, in the great majority of cases, an unprofessional assistant might take the place of the obstetrician. This, I believe, will be the case when women are as well informed as they should be, and when they are worthy, through preparation, which is simply *right living*, to inherit the promised state. 'There shall be no more pain, neither sorrow nor sighing.'"

But as things now are, a professional adviser is necessary, though the patient need be none the less instructed in all things pertaining to Maternity.

"The mind of a parturient woman is often observed to be in a sort of tumult, so that she grows bewildered with doubts and fear and pain.

"Women are sometimes observed to become much disordered by this doubt, fear, and anguish, and so fall into great danger from the reaction of mind on the body, the progress of the labor being suspended, or its course quite perverted.

"I have often supposed, in observing the good influence of kind and confident assurances, and intelligible explanations given to parturient women, that a great part of the distress they experience in childbirth is due to the alarm and doubt that attend it, and that to take away or annihilate the panic element of labor, would be to deprive the act of parturition of a large share of its anguish." (MEIGS.)

Are we not, then, on the highroad to painless labor, when we learn to control mental as well as physical states? I think so, and it all means proper instruction and obedience.

Ah! what is that?

"*An infant crying in the night?*" If the woman is in the standing or kneeling position, the attendant receives the child on her hands, and having been provided with soft wrappings, it is snugly rolled up and put in some secure corner while the mother is attended to. Of course, the navel cord is first severed. Wait until there is no pulsation felt, when, with narrow tape or any good string tie the cord securely, wrapping the string around several times. Now, make another tie about an inch from the first one, towards the placenta, which should be about the length of your finger from the navel. Cut the navel cord with dull scissors; this prevents bleeding so profusely. Place the hand on the abdomen, and find the womb contracted in a hard ball; the placenta has been expelled into the vagina, and can be carefully removed.

If, however, the womb is not felt or is very soft and yields to light pressure, dip the hand in cold water and give a few gentle frictions to the abdomen, or wet the end of a towel in cold water and strike the abdomen quickly but lightly with it. This will cause the womb to contract. Let the patient place the back of her hand to her mouth and blow against it, or make the effort to do so. Take the placenta in the left hand and roll it around with the right hand several times, so as to gather the membranes into a string, and lessen the liability of some of them adhering to the internal surface of the womb, which would not be pleasant as offensive discharges follow.

The placenta sometimes waits longer, and then the frictions and sudden applications of cold water should be repeated, and the patient encouraged to make strong bearing down effort.

Wait patiently — so long as there is no hemorrhage, you can afford to do so. The expulsion is a natural office, and, unless the case is an exceptional one, should not be interfered with.

Have ready the bandage, and soon as the placenta is removed, wring a towel from cold water, fold, and place on the abdomen. Over this several layers of dry flannel, and then bring the bandage around the whole, and pin very snugly *from below upward.* This is a time when snug dressing is admissible; comfortably tight. Now sponge in warm water any part of the surface that has become soiled, carefully wash the vulva, and apply soft, dry napkins, pinned to the bandage at the back and before to keep them in place. If the gown has been rolled up and fastened under the arm-pits, as the later stage of labor came on, and a folded sheet pinned around the body, it will be found very easy to unpin this soon as necessary, and let it become soiled instead of the gown skirt. Straighten the bed-clothes, wrap flannel about the legs, see that feet are warm, and let her *rest.* The child may be anointed with oil over the whole surface, and allowed to remain well wrapped, while preparations are made for the first bath. There need be no hurry. Be careful to have the skin everywhere well cleaned. Dress the navel. Take a piece of old linen several folds in thickness, cut a hole in the middle large enough to admit the cord, oil this cloth, place it on the abdomen, drawing the cord through and fold over the cloth so it will securely hold its contents. Put on the "band" so as not to be too tight, and proceed to dress the newly-arrived. Soon as this process is completed, the mother may allow her child put to the breast. It is a good plan to do this early.

"Eat?" Did you ask me about eating? And "what shall we give baby?" Well, you will remain in bed ten days; you have performed a feat which taxed your vital powers to their utmost, were engaged in it nine long months, and now does a nine-days rest seem too long? I know it is not. Too many women have come to me for relief from maladies which were induced by being entirely too smart at childbirth. Eat gruel; have it made right. Fruits, nicely cooked, and very little sweetened. Do not eat canned fruit. Dry bread, dry toast; unbolted bread, of course. Do not live in your taste for food;

your requirements are met with what I have named, and it is *safe* for you to be guided by enlightened reason. Drink hot water, but not tea, coffee, or chocolate. Until after the third day I advise a *diet of gruel* almost exclusively, unless the flow of milk is excessive, when merely dry bread should take the place of more moist food. Do not eat oftener than usual, twice or three times a day. Generally cooked fruits agree with lying-in patients better than raw fruits, but that is not decisive. Eat raw fruit if you are sure it suits you. Whether you are a meat eater or not at other times, do not use meat now; not until your lying-in period is past. You will be rewarded for whatever self-denial this advice imposes. Your baby will be better as well as yourself. And what shall baby do before the milk comes? Live on what it gets from the breast, and on warm water fed from a nice bottle.

The very best monthly nurse I ever knew, Mrs. H., always takes a bottle of her own when she cares for an obstetric patient, and she trains baby to regular hours and all sensible ways. Baby is happy if kept warm and clean and *quiet.* It is cruel to handle a new baby, or to shake, rock, toss, bounce, trot, or otherwise persecute the little creature that demands to be let alone in peace.

You will not receive your *dearest* friends for ten days or longer. It is no time for visiting. But, to our further advice. Have the compress re-wrung from cold water every time the bandage is adjusted during the day. Change the flannel cover for dry, and also if the bandage becomes soiled change that. Keep it pinned very snugly. If the bowels do not move before, give a full enema of warm water the fifth day. If it can be done, use a bed pan, but if not — and some cannot control their reluctance to its use — the chamber may be used in the bed. This is better than to get out on the floor.

Hot spongings of the spine and hips will be grateful daily. A general sponge bath, also, in warm water, about every alternate day. Keep the breasts well drained. There is no need of "broken breast;" it is occasioned by culpable neglect or ignorance.

Train baby from the first. Once in three hours during the day and once in the night is *the rule.* I have observed very

carefully and extensively the effect of such advice in its practical workings, and in not one instance has it proved other than beneficial. More, it is declared by those who adopted this plan to be a

BLESSED GIFT TO MOTHER AND CHILD.

I have a little girl baby, born a few months ago—Hattie T.,—and from birth to now she has known not one hour of illness. The mother passed through a serious experience with *crural phlebitis*, called "milk leg," and during the whole time Hattie was not allowed to vary her hour for eating, except that she slept overtime frequently, and was then allowed to wait till the regular hour came around.

If she becomes restless and seems to call for food, hot water is provided, and that is satisfactory. Every one pronounces her a marvel for good-nature and loveliness in all respects, and she is gifted with beauty, too.

Did you say "tired?" "Too long in bed?"

This is your opportunity to make the acquaintance of *yourself*. Who are you? What are you?

I think the lying-in period will be none too long if you arouse thought-power, and apply it to many questions which are to come forth out of the to-morrows for solution, which, indeed, are waiting to be solved to-day.

"What if baby has colic?" Give plenty of warm water, using the bottle; that is the most convenient way of feeding baby. A small enema of warm water will afford relief, putting hot, dry flannels over the abdomen, also, and wrapping up very warm.

Do not invest in a cradle. Do not allow your baby to be rocked, but let it grow in quiet and as nature intends. At three months, once in four hours feeding is sufficient, and soon, not at all during the night.

I need not caution the one who will follow these directions to beware of the deadly sin of drugging a child with cordials, soothing syrups, and the like inventions of child-destroyers.

But the ten days are gone. You may put on a tea gown and sit up for an hour at a time, and to-morrow or next day

join the family at table. But for two weeks or a month more rest than activity must be observed.

This is for reasons which affect the spiritual nature as much as bodily health.

You are not animal, at least it may be taken for granted as true; and the higher life comes forth and pervades every department of being, even to the ultimate physical nature, and does so in the still, quiet season of retirement, which it is the right of every woman to have provided for her at such a time.

She descended to the very brink of death for her child, for her husband, for humanity. Now she rises, and is drawn with increased attraction toward the heights whither she would have her loved ones and all the race ascend.

Is this lost time? Would it be wiser to perform feats of physical strength to show what a tough animal woman is?

CHAPTER III.

CHILDREN.

" What does little birdie say
In her nest at peep of day?
Let me fly, says little birdie,
Mother, let me fly away.
Birdie, rest a little longer
Till the little wings are stronger;
So she rests a little longer,
Then she flies away.

" What does little baby say
In her bed at peep of day?
Baby says, like little birdie,
Let me rise and fly away.
Baby, sleep a little longer
Till the little limbs are stronger;
If she sleeps a little longer,
Baby, too, shall fly away."

ALFRED TENNYSON.

Doctor: The lesson for to-day is unnatural; but, as children seem compelled to run the gauntlet of an existence full of pathological "bears in the way" likely to catch and tear the little ones in pieces, perhaps it is essential to know what sort of bears they are, and how to avoid them. I say again, that diseases of children are wholly unnatural. There should be nothing of the kind known. It is a sad comment upon modern human parentage that the civilization of to-day estimates it more like an excrescence desirable to become rid of, than as a godly ally which starts the upward, highest, noblest tendencies, and awakens the soul's innate powers. This should not be; *it will not be.* Mothers! Do you not

" Hear with that mysterious sense,—
Breathings that evade detection,
Whisper faint and fine inflection,
Thrill in you with power intense?"

Viola: But whole books are written upon the diseases of children, and one would think it the most natural thing in the world for them to be sick.

Julia: Yes, and they are sick. They die so easily; from a few days old, all along babyhood and childhood, it is one succession of ailments.

Doctor: But such a state of things is *not* in harmony with God's plan. However, we must take our position among things as they are, and from thence seek a better way.

A London physician says, "*Constant sickness* is a common trouble of mothers during the first year; the cause is almost always injudicious feeding." Not so with *our* mother. She keeps her own health up to so high a standard, through correct living, that baby draws nourishment adapted to sustain health and promote growth and vigor. She does not use wine, or beer, or any kind of stimulant, preferring to have a sober baby, which the wine or beer drinking mother cannot have, from the earliest period of its existence until baby is weaned.

Julia: That is a shocking statement. Do you say, because the mother's blood is in common with that of the child, for it is from the blood the milk is secreted, that if she takes alcoholic beverages, the child is affected?

Viola: Why, Julia, you answered your own question. You must know of a common experience like this — that medicines which the mother takes often make the child sick, while the mother will be but slightly affected.

Julia: Perhaps this accounts for what our neighbor, Mrs. J., said — that she never gave her baby sleeping medicines or soothing syrups, and found that she could control its restlessness by simply taking her beer, which helped baby and made it sleep.

Doctor: Did that mother know she was a sort of walking brewery for her baby? And that it is really a drunken baby? It is true. If the mother's diet and mental states are capable of affecting a child, why not her drink? Is alcohol any exception to the rule which allows substances taken into the mother's stomach, and absorbed into the blood, to be taken up by the secretion of the mammary glands? In fact, nature will even defend the mother from the full effects of harmful materials by seeking to rid the system of them through that channel, and that, together with the fact of the child's greater sensitiveness

to such impressions, accounts for what you said about the mother's medicine affecting the child more than herself.

Viola: What a comment upon motherhood!

"Who can tell what a baby thinks,
Who can follow the gossamer links
By which the mannikin feels his way
Out from the shore of the great unknown,
Blind and wailing, and alone
Into the light of day?
Out from the shore of the unknown sea
Tossing in pitiful agony,
Of the unknown sea that reels and rolls,
Specked with the barks of little souls —
Barks that were launched on the other side
And slipped from heaven on an ebbing tide,—
What does he think of his mother's breast,
Bare and beautiful, smooth and white,
Seeking it ever with fresh delight,
Cup of his life, and couch of his rest?"

Julia: It is strange that women do not know better than to take those things. Our good temperance women think they must have stimulants in order to bear the tax of nursing. Not all think so, but some do, and I shall try to show them that alcoholized blood is the material out of which the little body is actually to be formed so long as the nursing period lasts, which is usually at least twelve months.

Doctor: It is not an intoxicated baby we are to consider as a type of what should be, yes, and *is*, in many, many instances, thank God. Chosen maternity, prepared mother, trained baby; where may we look for the diseases of childhood? From the first day, as already said, regular hours for taking food are observed. Early, perhaps in about three months, baby takes food four times a day, and very seldom, if at all, during the night. Daily airings, a quiet life in sunny apartments and out of doors, an early bed-time, no rocking to sleep, simply changing the day for sweet, fresh night clothes, and tucking up in the crib: no chance for "pestilence" here.

Even teething will be safely encountered. When there is feverishness and head hot, a little hot foot-bath of a few moments, cool cloth on the head, and nice soft bandage wrung from warm water pinned around the body. Dry flannel to cover this. The little half pack or bandage, and full enemas of warm water, will give quick relief. Spongings down the spine are a comfort to the teething child.

An occasional hot bath, about 95° to 100°, for five to ten minutes, then wrap in a dry warm sheet, and over this a blanket closely drawn about the body and limbs, allowing this to remain for an hour or so, or as long as quiet and rest are secured.

Any irregularity of the bowels is promptly relieved by these means. When the time approaches for baby to be weaned, make a thin gruel of whole wheat or unbolted flour, cook this half an hour or longer. Strain through a fine sieve, and with this gruel put new fresh milk, perhaps about equal quantity. This is suitable without any seasoning.

Viola: Children do have hard struggles during teething. And those so unfortunate as to be left to the care of nurse girls, or, what is equally as bad, the uninformed instincts of mothers who do not *think*, suffer inevitably. If the child cries, the breast is offered, at any and all hours of day and night. No wonder the weary dragged-out woman resorts to means which promise strength, even if it be only temporary.

Doctor: There are diseases attendant upon the period of dentition, in children as usually met, and there are disordered digestion, bowels loose, and green lumpy discharges, or diarrhœa, and sometimes, but not usually, constipation. Convulsions and brain disorders are also very common. Paralysis is liable to occur suddenly. Some children have difficulty in urinating. Marasmus, thirst, irritability, constant restlessness, appetite delicate, etc. Summing up the whole group, let me assure you there is nothing formidable in this. Not so much so as the non-receptive attitude liable to be assumed towards truths which would release these little sufferers and make them happy in their newly-tried earth experiences.

Throw away the nauseous medicines. Leave them for the doctors. Mothers have no need of them. Make your darling *comfortable*. Warm the feet, cool the head, give the beautiful fruits for food. Compel the household to observe quiet. Do not allow loud or boisterous talking, or tossing and any exciting influence. Do not try to "call baby out" in the many ways its admirers are tempted to do. Often at what fatal expenditure of vital force on the part of baby is the delight in its interesting ways procured. Anxiety prompts almost to

force a sick child to appear better. I now recall a case illustrating the unwisdom of such a course. A delicate precocious child had become suddenly ill after attending a child's party and partaking freely of cakes, ices, and confections, besides having been much overtaxed nervously through what comes of proud and delighted parents and friends. This child was the center of attraction in a large circle of fond admirers, and must contribute to their enjoyment at the expense of its own life forces. But they did not so understand the matter. On my first visit to the case, I said there is no hope for your child if you allow any tax made upon her brain. That evening, when I left, symptoms were abating; it was congestion of the stomach, with black vomit, and things appeared prosperous. What occurred? Company came; the unwise father permitted the sick-room to be invaded, his child, feeling better, shared in lively conversation greatly to the entertainment of all, and the hour was late when the guests departed. Next morning on my way to the house I met this father, and he exclaimed joyfully, "Ah, doctor, your patient will disappoint you, she is much better, talked and sang for company last night, and before we arose this morning called for her books and playthings; you will find her sitting up in bed enjoying herself!" I replied, "If you have allowed that brain to become taxed in those ways I will find my case *not* better." It was true. On entering the room I saw the child was dying. The last spark of life in that little body was burning brightly, but in a few hours it was completely gone.

Viola: I suppose the vital forces had all they could do to sustain remedial effort prompted by the presence of materials in the system obnoxious to them; diverting the nervous power into other channels prevented the full accomplishment of remedial purposes by exhausting the only means through which they could be attained. Hence the struggle between the chemical and vital forces became unequal in a direction which allowed the latter to be overcome. It is plain that the *possibilities* of recovery lay in saving, not expending, the vital force.

Julia: But it is so hard to refrain from getting evidence very frequently which you think sustains hope. Those parents

were happy to see the child interested, and to them it was sufficient proof of its bettered condition. Many do likewise.

Viola: Is it proper to cut the swelled gums of a teething child?

Doctor: Quite so, if the right time is selected. Be sure the tooth is making its way through with a determination to appear shortly, for repeated cuttings only give unnecessary pain, and also hinder dentition, for a cicatrix is formed which resists the growing tooth more than did the gum uncut.

Sometimes *earache* evidently troubles the little one when teething; cloths wrung from hot water placed to the ears, and covered, will ease. A small fomenter with hot water placed on the pillow, and soft flannel over that, is a convenient and agreeable way of applying warmth to the ear and head in these cases.

Spasms will readily yield to the full warm bath, and when relaxed, wrap in dry warm sheet and blanket, with fomenter to the stomach and something warm to the feet, while the head is cooled by warm spongings. Do not leave a wet cloth on the head. The bowels must be cleared by full enema, and for a few days succeeding the spasm, give only a small amount of food, and that well-cooked gruel and cooked fruit juices. *Quiet* must follow.

If a child seems to be failing in flesh and strength, appetite delicate, tongue coated or shiny, bowels constipated or quite too open, passages offensive and acrid so the private parts are chafed badly, etc., there is something wrong at the center. The child is not nourished. With these symptoms there often is vomiting, restlessness, peevishness, some fever, and the sleep is not sound. No matter what you name the trouble, it is time to begin treatment.

Foment the liver and bowels fifteen minutes twice a day. Give a full enema of warm water, adding a spoonful of sweet oil.

Put on a compress over the liver and bowels, and pin dry flannel snugly over this. Give a hot foot-bath. Sponge face and head in warm water. Cool water in teaspoonful doses frequently. Quiet and rest. For food, give a gruel made of corn meal cooked two to three hours, thin, let it stand, and a smooth substance will form on the upper part. With this put an equa

amount of bran tea. Add a few spoonfuls of milk. This at regular intervals. Fruit juices also may be given. In using berries, do not allow a child at all delicate to eat them raw. Better cook and strain to reject seeds. Fruit juices and good unbolted bread are good food. Manipulate the arms and legs gently, also the abdomen. Place the child on a couch face down, and gently press the sides, down the spine, and pat a few moments. There are so many soothing, quieting ways which only an enlightened mother can devise, and she will not fall short of the best. Sunshine and pure air will aid in the work of restoration. So important is this thought of

SAVING VITAL FORCE

that I would write it in large letters on the walls of nurseries all over the land.

Cruel vampirism practiced upon the defenseless little ones takes form variously, and this everlasting *kissing* of children is one of the ways which I doubt not are extremely repulsive to the sensitive creature that is victimized. How is the delicate lily or rosebud affected by touch and handling? What of the pet kitten that proverbially becomes puny, and finally dies, of fondling caresses bestowed by its little owner? Has a human child more vitality, proportionately, than a cat-child, which comes of ancestry said to possess nine lives? If, then, on the same animal plane, like causes produce like results, the added call for nervous expenditure suited to the developing mental powers of the human ought to be sufficient reason for protection against influences likely to become exhaustive of the life forces.

Viola : Babyhood, then, is a vegetative period. You would clothe a child comfortably, securing entire freedom of every portion and muscle of the body, equable warmth, and scrupulous cleanliness, regular supply of suitable food and drink, space lighted by the sun and purified by wholesome breezes, opportunity for —

"Ever some new tiny notion
Making every limb all motion ;
Catchings up of legs and arms,
Throwings back and small alarms ;
Clutching fingers, straightening jerks;
Twining feet, whose each toe works ;
Rickings up and straining risings ;

Mother's ever new surprisings ;
Hands all wants and looks all wonder
At all things the heavens under.
Slumbers, — such sweet angel-seemings,
That we'd always have such dreamings."

Doctor : Yes, and thus would a sound foundation be secured. The immortal structure demands no less. Every detail of baby-care should be familiar to a mother. From the first she must know how to have the bath properly given. Warm water at about 95° used. A quick wash-off in basin or tub succeeds careful local washings ; under arms, about the neck, ears, groins, toes, and fingers. Use pure white soap for this, the highly perfumed fancy soaps are not so good. A little borax in the water for these local washings is useful. This done, put baby in basin or tub, and quickly rub and wrap in large soft towel, or little bath sheet. Roll and rub and pat the body and limbs until a full glow is produced over the whole surface. What a happy experience this, as evidenced by the "crows and laughs" and unwilling return to the very trifling restraint of simple clothing. It is well to let a child luxuriate in an air bath daily, and, if more convenient, this may be taken at the time of night and morning dressing. All clothing should be dispensed with for the time. Daily buggy rides on quiet streets, if in town, are important as passive exercise ; but *babies* should not be taken "down town" by the nurse, hauled all about the streets, the baby carriage allowed to remain anywhere to suit nurse while she gossips with her friends, and probably in her impatience inflicts some punishment, or frightens the little one into silence, if its wrongs or uncomfortableness should prompt to outcry. I have witnessed cruelties on the streets of this very character. Have known mothers to be out pleasure-seeking, leaving their darlings to the pitiless care of an ignorant hireling. And it was not for lack of affection for the child, rather was it want of *appreciation* of the royal gift which was hers in motherhood.

The mother must know exactly how to prepare baby's food, and what kinds are best suited to its well being.

The office of physician is also vested in the mother. It is not unfrequently said to one who has passed through a trying and protracted season of watchful anxiety over the sick child :

"Had it not been for your good nursing the case would have failed to recover. That did more than all the medical aid I could give."

Julia: I saw a baby all broken out with an eruption of some kind, I think the mother called it some form of eczema; salt rheum or tetter the doctors had told her. It covered the face and scalp with a crust which it was impossible to prevent the child from tearing off, doubtless the itching was so severe. This had come on a few weeks after teething commenced, and it was thought the little sufferer would get relief as soon as the teeth appeared, but it only continued to increase in spite of all that had been done.

Doctor: This form of skin disease may begin soon after birth, and is not confined to the face and scalp, for the whole body is affected in severe cases. It commences as a number of scattered red points, which quickly run together, and moisture soon exudes. It is called *milk crust*, because it seems to be associated with nursing. Sometimes it is called tooth-rash, and is expected to disappear in good time, as the first teeth are cut. Here is a fact in such cases. A *habit* is formed, and a good one, which produces return of the disorder at times afterwards. It is the same as

Scald Head,

which discharges a great deal of fluid, and is very aggravating in its persistence.

While speaking of these eruptions common in childhood, I would name a kind of eczema which appears behind the ears, or in the bends of the elbows and knees, sometimes about the face and hands; it is called tetter. The itching is frequently very troublesome, even before eruption appears. When a child begins to chafe, wash in good pure soap, with borax, rinse the parts in bran tea, and wipe off dry, immediately dusting with corn starch or lycopodium. Be careful to prevent irritation from clothing. Woolen garments cannot be worn next the skin of an eczematous child, but should be worn over cotton or linen. Colored stockings are often poisonous, and their effects may produce a stubborn exhibition of this disorder.

The diapers of infants are not unfrequently prolific causes, I am sorry to say. It is a way of some mothers to dry a diaper which has received only the urinary excretion, and allow it to be replaced as though it were fit to be used without having been washed. Surely it is an extreme case that forbids so trifling an effort as that of simply placing a wetted diaper in a vessel of clean water, rinsing and drying it ready for use, even if not smoothed on the ironing-board. Urine is an excretion. It has been cast out of the system as unfit to remain there. A cloth saturated with it, even if dried, is capable of yielding enough impurities to produce irritation of the skin, and doubtless some degree of blood defilements, for the skin absorbs substances in contact with it without choice or reason.

Julia: How is a child to be cured of these eruptions? From what you said of distilling alcohol into the system of a child through the mother's milk, I would infer that good effects might be produced as well by securing good material from which the lacteal secretion is to be formed. So the child while nursing would depend for improvement in health very much upon what the mother provides by way of aliment.

Doctor: Very true, indeed. The larger number of children's ailments are curable through the mother. She must live on pure food, obey health laws, and maintain a high degree of physical vigor, aside from any intellectual or moral consideration. A child so afflicted must not be treated as having only a *skin*, and that wholly the cause of its own bad condition. The affection is

CONSTITUTIONAL,

and must be so considered in any form of treatment selected. If nursing, the mother must live on absolutely a grain and fruit diet. If the child is at such age as to be weaned, the food should be very pure, fruit juices and bread, no vegetables, unless vegetable tea is used as a soup with bread. All hygienic aids may be invoked. But the skin needs only to be kept clean; temperature is an influential means in these cases. As hot water as will be allowed should be used in washing the affected parts. There are innocent soothing appliances in the way of lotions; some suit some cases better than others.

Diluted glycerine, about half water, a weak carbolic wash, weak borax water, etc. Sometimes pure sweet oil is agreeable. Be sure not to allow any poison to enter as an ingredient. But nothing promises such success as hot washings, and wearing of fine, soft, cool compress covered with dry. A baby seven months old was brought me over twenty years ago, *covered* with a crust — head, face, body, and limbs. The mother was an apparently healthy woman, of full habit, and quite uninformed as to anything relating to health. But she was a true mother, and willingly observed directions. Her baby first showed signs of this eruption when two months old. Physicians had been in attendance during the months from that time until I first saw the case. What did I do? Told the mother she must live strictly on fruit and grains. She was a high liver, accustomed to rich and dainty food and drinks. She obeyed at once, after learning my reasons for such a request. Baby's gums and mouth were so inflamed and sore they bled often when nursing. I ordered fine linen sheets and soft wool blankets. Wrung the sheet from pure soft water, folded it so as to wrap the body from under the arm-pits to below the feet. About the shoulders and arms wrapped another piece of linen so that the arms could be free. Covered all with dry woolen. The head and face were similarly wrapped, leaving space for the eyes, nose, and mouth. Two nurses were required. When the applications were first made the child fell asleep and was quiet two hours, which was unusual, even with using opiates. Whenever it became very restless the blanket was opened, and the heated and drying sheet sprinkled with pure warm water, and a fresh dry blanket put on. Each morning the whole mass of eruption was well cleansed, using hot water, borax, and nice soap, rinsing in bran water which was strained through fine cloth. From irregular times and all times of eating the breast was given once in four hours only. Pure cold water, slippery-elm water, and flax-seed tea were given frequently. Radical change in diet affected the mother unpleasantly at first. Three weeks of close attention day and night, by nurses and mother, brought the case to a point where we could bandage each arm and leg separately, a bandage about the body and thighs, and a loose gown put on over this. The head and face began to

heal, mouth less inflamed, and hours of quiet and rest were had. Improvement from this point was marked ; in six weeks more of purification and healing the case was comfortable. It took three months to effect a cure. The mother was opposed to weaning her child, and that fortunately brought her into an experience which resulted in adding one more noble woman to the ranks of the self-disciplined and enlightened. I have given you this in order to illustrate the truth of the unity of disease and unity of parts in the organism. This established in the mind gives clearness and force to thought concerning remedial means, and the most efficacious, because most simple and natural, will be chosen. Less severe cases would demand less heroic administration of treatment, perhaps not less strictness in diet.

Viola : Is not scrofula something like the case described?

Doctor : Scrofula is simply an inability of the system to cleanse itself. It is a condition below par. Hence unused and unusable materials accumulate, and many forms of remedial effort are assumed in the struggle to rid the system of them. It is not a distinct disease, but interwoven with the whole pathological fabric, giving light and shade to pretty much all the ailments.

Julia : But here is a real distinct disease — whooping-cough. What can be done for that?

Viola : I can prescribe from the case book. Fomentations to the chest each night for half an hour, followed by compress well covered and warm at night. Bowels kept free, food pure, the skin made active by dry rubbings night and morning. Such little attention will keep up the strength while the cough has its own way.

Doctor : To summarize. Disease is not one thing in childhood and another in adult life. It is always an action. The same law of cause and effect, the same natural cure methods adapted to states are applicable. It matters little what name the disorder bears, for it is only a varied process of purification and elimination that is indicated.

And now to mothers I would say such encouraging words that my sanity might be questioned. Here are your possibilities. Heaven-crowned womanhood. Inspired motherhood.

Regenerated manhood, and angel-gifted childhood. They are not realized fully to-day, but, so far as in us lies, to reach out after these, so far do they become realities to us.

Sweep sickness out of your homes. What a change! *It can be done.* You can bear your children *without pain.* Can bring them up to manhood and womanhood *without sickness.*

Will you do it? I believe you will.

"God works in all things; all obey
His first propulsion from the night.
Wake then and watch!—the world is gray
With morning light!"

CHAPTER IV.

UTERINE PHYSIOLOGY.

Doctor: To-day it is our privilege to enter upon the study of those physiological and pathological peculiarities of the human organism, really known only to Woman. "We only know what we have lived;" and here I would further *insist* that these subjects be taken up as a *study*, which affords attractions not inferior to any other branch of knowledge, and vastly more important than many things which receive your very earnest attention and endeavor. I so heartily invite you to this work, because I believe it a mission of usefulness and benevolence.

The want of information among those of our sex, as to the meaning and tendency of certain trains of symptoms, their causes and indications for cure, presents the humiliating, distressing facts pertaining to the great army of the uncured, marching faithfully from one physician to another, from town to town, city to city, state to state, continent to continent, ending at last in the gradual approach to a comprehension of the truth gained by such dearly-bought experience, or, what is more commonly the case, finding refuge in the grave. Nearly all these cases are at first of very trifling importance, as is well known to medical practitioners, and what is it but popular ignorance and superstition of the laity, coupled with selfishness and love of gain in the profession that allows these simple affections to be so mismanaged, the patient so misinformed, that the health, happiness, and usefulness of our women are to-day ruinously sacrificed?

Woman must *know* the mechanism of her frame, its physiological functions and pathological liabilities, also the laws which keep "the harp in tune," and in conformity to which her life should be adjusted. Then, if she suffer the very *extremity* of pain and invalidism, it is from enlightened choice;

with resolution becoming a martyr, she may cling to her maladies, wrap them about her like a cloak and "lie down to"—*suffer*.

What is it, let me ask, in the organization of woman's frame that can be so secretly deranged, so mysteriously disordered as to elude all investigation and inquiry, all attempts at mitigation and cure? What is the disorder that may not be made in its incipiency to yield to suitable prescriptions? *There is none*. All this mismanagement and mass of incurability lies not at the door of our organizations, but of our mistaken notions concerning ourselves. Who is at fault for this ignorance? Both "Delia and her doctors." *She* does not ask to know — scarcely to be cured, for she has a notion that it cannot be done, but only to be relieved of present pain, and her doctors do not care to have her know.

Dr. Meigs, in remarks to his class, says: "The fault is chargeable to us, and our fault consists in the concealment within our breasts of a great amount of

COMMUNICABLE INFORMATION

which it is our duty to pour forth into the public mind, and which we should certainly diffuse, spread abroad and make common, but for our clerkly or clergyable pride. Doctors have an idea that their knowledge cannot be imparted to the world, and that it is better, in fact, that the world should not be possessed of such recondite information as theirs. I believe that if any medical practitioner be endowed with a clear perceptive power, a sound judgment, a real probity, and a proper degree of intelligence, he will, so far as to the extent of his particular sphere of action, be found capable of greatly lessening these evils of which complaint is here made; and if these qualities are generally attached to physicians, then it is in their power to abate the evil throughout the population in general."

Viola: It seems to me this absence of information among us fosters evils which affect our views as to the propriety of applying to some phase of quackery, which may happen to break out in our midst, like a transient epidemic, infecting all the foolish people around, and leaving those who live through it no better, no wiser, even all the more susceptible to the next turn

of the wheel, having "horse-room and cart-room for being as mad as we please."

Julia: I have an idea that, if even the little knowledge which you and I possess of the physiology and anatomy of our pelvic organs, together with what we know of therapeutics, were in the possession of woman in general, she would not care to be as mad as she pleases, to submit herself to methods of treatment which violate every instinct of true modesty, to allow herself no voice of remonstrance, or even inquiry as to why this should be done, to see her name paraded in the public print as one of the "cured" of some uterine displacement, or worse, to be stared out of countenance by "agents" of abdominal supporters, pessaries, specifics for womb diseases, and for drugs which must not be taken during all times of the month, etc.

Doctor: No, no. All these shameful witnesses to our lack of discrimination between the true physician and the quack will be swept away, when woman has recourse to reasoning about the matters which concern her welfare, and through her, man's welfare also. I remember, when Charlotte Cushman, in "Meg Merrilies," offered her devil's broth to honest Dominie Sampson, and he feared to take the dose, the witch said to him,

"Gape, Sinner, and Swallow."

Dr. Meigs quotes this as a fair representation of the way doctors and patients generally do, — doctors clothe their proceedings in mystery, and patients yield implicit credulity and obedience, without reason or question. Both parties are injured, thanks to the law of reciprocity. On the other hand, a well-informed patient is the most exact in all duties which her intelligent physician points out, while in return, the case prospers, so that reputation for skill is assured to her doctor. The best instructed patient is the one most truly grateful for medical intervention, and most confiding in your judgment and skill, for she is governed, not by a blind faith, which is only credulity, but enlightened reason. It is the difference between dense fog and bright sunlight.

Viola: "Would that all our brethren in this land might

adopt views like these. With their united force of intellect, character, beneficence, and social position, it would be but a short time ere the diminished head of charlatanism, under whatever disguise, would be found to lift itself up only among the most ignorant and abject portions of the population, instead of riding, as it does to-day, with chariots and with horsemen, a shame to the intelligence of the age, and a perpetual eyesore to the lover of truth and contumer of every species of imposture." (MEIGS.)

Doctor: We are consuming time in this preliminary. Turn to your books on uterine anatomy, and tell me where the *uterus is situated?*

Viola: In the center of the pelvic cavity.

Doctor: Has the uterus any connections with the other organs contained in the pelvis?

Julia: It has, and very important ones. It is connected with the bladder which lies in front, and the rectum, back of it. So its diseases and displacements have a marked influence on the functions of these organs.

Doctor: In what are the uterus and its appendages, the Fallopian tubes, ovaries, and round ligaments, contained?

Viola: In folds of the peritoneum, which folds are called the lateral or broad ligaments.

Doctor: What is the form of the uterus?

Julia: That of a truncated cone, the organ and its appendages somewhat resembling a pear, with the base upwards, and flattened from before backward.

Doctor: What is the size of the uterus, thickness, and the capacity of its cavity?

Viola: "The virgin uterus," says Dr. Montgomery, "is about two and one-fourth inches long, one and three-fourths broad, and about an inch from back to front, with a cavity which would not more than receive into it the kernel of an almond."

Doctor: What is its upper, bulky portion called?

Julia: The body or *fundus;* the truncated summit, which connects with the vagina, is called its *neck*, or *cervix;* and its opening into the vagina, its *mouth*, or *os uteri.*

Doctor: What is the length of the neck?

Viola: From an inch to an inch and a half long. The mouth extends somewhat into the vaginal passage, dividing there into two projecting *lips*, front and back, between which is a transverse cleft, the orifice of the uterine cavity.

Doctor: What is the shape of the cavity of the uterus?

Julia: Triangular, and at its upper angles open the orifices of the Fallopian tubes.

Doctor: What is the weight of the uterus?

Viola: About an ounce and a half, and only half an ounce greater in those who have borne children.

Doctor: What is the substance of which the uterus is composed?

Julia: It has not been fully understood, but is agreed to be a *peculiar* muscular structure, and the whole organ undergoes remarkable change during pregnancy and parturition. Churchill says: "The structure of the *uterus*, in its quiescent state so close and firm, becomes loosened; its interlacing fibers being separated, numerous interspaces are left, some of them of considerable size, and mainly occupied by the enlarged vessels and nerves. Some authors affirm, and I believe with truth, that an addition of new matter takes place in the substance of the womb during gestation, and point out as a proof, the immensely increased size of the womb, and the augmented thickness of the walls."

Doctor: Is there not an equally remarkable change in the blood-vessels?

Viola: There is, "before conception, just so many transmitted red blood [vessels], and were visible, as sufficed for its nutrition and for its periodical 'flow,' but during pregnancy, these vessels increase to many times their original size; and vessels into which red blood had never before penetrated, now enlarge, and carry red blood for the nutrition of the fetus."

Doctor: How are the nerves of the uterus affected by pregnancy?

Julia: They become enlarged to a remarkable degree, and this is very wonderful, for it is not from distention, as in the case of the blood-vessels, but is the result of an actual increase of substance in each nerve.

Doctor: How are the lymphatics affected?

Viola : In the virgin uterus they can scarcely be detected, but now undergo a development similar to the other vessels, and form a remarkable portion of the vascular network supplying and surrounding the uterine system.

Doctor : What membrane lines the cavities of the uterus ?

Julia : Mucous membrane, but it differs somewhat from the mucous structures in every other part of the body, in being more intimately blended with, or continued into, the other structures forming the walls of the uterus.

Doctor : What office do the ligaments of the uterus perform ?

Viola : They steady the organ in its central position, but are not the main supports of the uterus, because they are not firmly attached, but float loosely in the pelvic cavity and yield to the enlargement and changed position of the uterus during pregnancy.

Doctor : How are the broad or lateral ligaments formed ?

Julia : By the reflexion of the peritoneum from the front to the back surface of the uterus, and between their folds there is an areolar tissue, which allows of their adaptation to the enlargement of the uterus in pregnancy.

Doctor : Where are the round ligaments implanted ?

Viola : Each side of the uterus, just below the ligaments of the Fallopian tubes.

Doctor : Describe the Fallopian tubes.

Julia : They constitute fibrous cords which support the broad ligaments, while they are enveloped in their peritoneal folds. The canal of the Fallopian tubes is lined by mucous membrane similar to that of the alimentary canal.

Doctor : Where are the ovaries situated ?

Viola : They occupy the upper margin of the broad ligaments, and are situated in the cavity of the pelvis, nearly on a level with the fundus of the uterus, about two inches each side from the uterus. The *vagina* is a very extensible, yet in healthy females, a closed canal. Its upper portion affords support to the uterus, assisted by the abdominal muscles, and somewhat by the lateral and broad ligaments. It is of various lengths, from three to four inches, the average, yet is often more than six, and even less than three. It is connected three-fourths of its lower portion with the rectum, and its upper

fourth is in contact with the peritoneum. The lower portion of the bladder and urethra are in front of it. It is only partially closed below, by a small sphincter-like muscle. It is lined by a mucous membrane, arranged into transverse folds, which are most numerous in the lower portion of the vagina. Just at the upper edge of the orifice of the vagina is the *orifice of the urethra.*

Physiology of the Uterine System.

Doctor: We must tarry awhile here, that we may appreciate the deviations from physiological rectitude which are to meet our search into the pathology of this marvelous portion of our organism. Perhaps no subjects which have claimed the attention of philosophers and scientists ever received more profound study or deeper interest than those which involve the physiological phenomena of the uterine system, and yet many problems remain unsolved. This does not much affect the practically important questions of menstruation, conception, pregnancy, and parturition, so far as the preservation of health or treatment of disease is concerned. Enough has been learned through the investigations of physiologists, and added experience of gynæcologists and medical hygienists, to carry woman up to an ideal standard of physical perfection. With that she ought to be content to let philosophers and theorists wrangle, if they like.

What is menstruation? Woman's peculiarity of structure, with certain organs and their functions, distinguishes her from man. Speaking of functions here, we have three peculiar to our sex, and will you name them?

Julia: The functions of menstruation, of bearing children, and of providing aliment for them in the mammary glands. These differ from each other very manifestly, but they are most intimately allied to each other, the one not being possible, generally, without the existence of the other two.

Viola: I have a list of names by which this menstrual function is designated, and, though not by any means exhaustive, will read it to you. Menstruation, courses, periods, visitor, terms, monthlies, catamenia, flow, time, spell, Aunt Nancy, and ever so many more. At what age is this function usually established?

Doctor: Perhaps from twelve to sixteen; climate and other influences have so much to do with its inception that rather wide latitude must be allowed for its appearance. It has a close connection with the power of reproduction, yet at the earlier menstrual periods we know the pelvis is not sufficiently confirmed in the union of its different parts to render conception, gestation, and labor less than *ruinous* to the prospects of the girl for long life. This is a matter which ought to be known and acted upon in reference to the fatal custom of marrying early.

As to the cause of menstruation, there has been continual inquiry among the learned for twenty-five hundred years, says Dr. Meigs, and to show what notions have prevailed, you may read his quotation from Thomas Rainald's "Woman's Booke, or the Byrth of Mankinde."

Julia: "The cause and reason why nature created this perpetual course of termes in woman is this: forasmuche as Almyghtie God had so institute that women should be conceaved, efformed, or fassyoned, augmented, nouryshed, and brought to perfection. This could not be done unlesse there were a commodious and convenient place to this office assigned and destinate, whereof nature created the wombe or matrix to be the sayde receptacle and house of office, wherein she mought, at her leasure, worke her devine feates about the seede once conceaved. Agayne, it is not inough the seede to be placed, unlesse also it have foode and nouryshment, to the increase and augmentation of the same, wherefore prudent Lady Nature full wisely hath provided that there should be always prest, and redy a continuall course and resort of bloud in the vaines of the matrix, as a very naturall course, spryng, fountayne, or well, evermore redy to arouse, water, and nourishe the feature so sone as it shall be conceaved; yea, although the woman do never conceave, other because she accompanieth not with man, other els for some other infirmitie; yet is there no faulte in nature, who hath prepared a place and foode to be at all tymes in redynesse."

Doctor: This was the explanation which was satisfactory in the time of Queen Elizabeth, but more accurate knowledge

proves that the menstrual fluid is not to be regarded as the appointed aliment of the fetus *in utero.*

Menstruation is not necessarily connected with any sanguineous evacuation whatever, says Dr. Troll, with numbers of other eminent investigators. It really comprehends all the phenomena of ovulation. Women develop and discharge a ripe ovule about once in twenty-eight days. I have made very close observation and study of this subject, and am willing to accept the idea that each woman is probably "a law unto herself," as to the time of ovulation, such various examples are presented of deviation from the average.

Superstitious Dread of Impending Disaster

to health and life leads women to apply for medical treatment when there is nothing to cure—except their false notions — and they are about the toughest cases in the world. I think I have done *more ineffectual work* in trying to dispel the illusions of some women, regarding their menses, than in anything where failure met my efforts. My dear *women,* lay aside notion and prejudice, and allow yourselves to be controlled by *the truth* of the subject.

Viola: I understand your interpretation of this function to be this: That the menstrual fluid of women is blood. Madame Boivin says: "The blood of the menses is just like that which is taken away from a vein." That what they call their "courses" is a *monthly repeated uterine hemorrhage.* That this hemorrhage is the sign that the womb shares the engorgement of the ovaries, which attends the last days of the maturing process of the ovules, as is well known. Menstruation, then, is simply *ovulation,* and the flow of blood, which is thought to be the main point, is only the outward mark, or symptom, of *ovarian ovulation.*

Doctor: Right. Learn it by heart, and teach your neighbors. One who knows the anatomical structure of the womb — its very delicate network of blood-vessels — has no difficulty in perceiving how any considerable engorgement of those vessels would result in their bursting, and thus the monthly engorged womb get relief, through the discharge of its surplusage of blood. One author says: "It is hardly too much to say

that the tenuity of these coats is so great as scarcely to exceed the thickness and strength of a soap-bubble." The experience of most women confirms this doctrine of uterine engorgement, in the sense of fullness, weight, dragging down, even of pain and tension, which attends menstruation. I know there is a doctrine to the effect that this discharge is "a secretion and not hemorrhage. At the same time it cannot be denied that those discharges do contain a large proportion of blood, nor that they coagulate like blood when drawn from a vein."

"Can solids be secreted? Could not a woman as well secrete a watch or diamond ring as one single blood-disk? Nothing can be secreted that is not fluid. A blood-disk is a solid, not a fluid.

Julia: Is not the determination of nervous energy to the uterine system, attendant upon the act of ovulation, analogous to what takes place when the function of any other organ is performed? A periodic function would be more marked; of the stomach,—some call the unusual amount of blood found in it during the performance of its digestive function a *congestion.* When the blood leaves the stomach the blood finds its balance again?

Doctor: Precisely. And while our views of the menstrual function are so widely different from those which obtained centuries ago, I think it is not certain that future light on physiological subjects will fail to establish something which looks very radical now, namely, the conviction that *hemorrhage is not an essential attendant upon menstruation,* but is rather a vice of the constitution contracted ages back, perhaps, and communicated through inheritance, just as diseases are, or tendencies thereto. The most peculiar and unaccountable mental attitude is assumed by women towards this office, and it is one of wild emotion, in which reason has no voice. A woman must see a profuse "show," even if her body has not half blood enough to keep it in decent trim. Her pale, anæmic daughter must have the menses *forced*, by some means or another. Talk to such an one, reason, explain: you know what a "jumping Jack" is —a wooden monkey toy; at the end of the spine is a string which you pull, and set Jack's arms and legs and head in motion. I have seen plenty of living women jumping Jacks,

They would be quiet, reasonable, sensible, intelligent, lovely, until I pulled the string which set their notions on menstruation to going. There was a general whirl then — all mixed up — no quiet until I let go the string. I hold on bravely sometimes, hoping to *break it* — and *sometimes* succeed, though as often fail. Numerous superstitious notions relative to the menses are still prevalent, even among the well educated. I have met with some that were quite equal to a passage found in Pliny: "But woman is the only menstrual animal, and therefore the only one whose womb produces what is called a mole. A mole is an amorphous mass of inanimate flesh, which can neither be cut with the edge nor pierced with the point of a knife. There is, perhaps, nothing in the world more monstrous than the menstrual fluid. Wine turns sour in its presence; seeds, when touched with it, lose their germinative faculty; hedges die, and seeds planted in a garden where it falls are burned up in the ground. If a woman with the menses sits upon a tree its fruit fails. Mirrors lose their polish, knives their edge, and ivory its brightness by contact with it. Bees perish in their hives, and brass and iron are seized with sudden rust and acquire a horrid odor if touched with the fluid. A dog that tastes it goes mad, and his bite is mortal."

Viola: We may well congratulate ourselves that a doctrine has been reached which lifts this important subject out of the region of conjecture, and preserves us from very serious mistakes. Dr. Meigs says: "Heretofore physicians have looked upon the bloody sign alone as the act; hereafter they will be likely to look upon the discharge of the ovarian ovule as the physiological act of menstruation. This act may suffice to cause the woman to bleed mensually, or it may prove insufficient to that end. It is, for the most part, a matter of indifference whether it does or does not cause the mensual hemorrhage; the essential thing is to mature and deposit the ovule. There are circumstances of the menstruating girl or woman that are able to prevent her from bleeding, notwithstanding she may enjoy all the other faculties of perfect health."

Doctor: The question must come up somewhere in our studies of menstruation, and it might as well be here, as to the time when the ovule leaves the ovarian bed. This is not known

exactly. Probably the egg escapes nearly at the time the womb begins to bleed. The uterus becomes relieved of its engorgement through the "flow," and the complete exit of the ovule is not accomplished until perhaps a day or two after, and it may be still later, from eight to twelve days, before it leaves the uterus.

CHAPTER V.

PELVIC DISORDERS.

Doctor: It is to Dr. Geo. H. Taylor we are indebted for the development of principles and methods in Pelvic Pathology and Therapeutics opening for woman a door which has been securely barred, a door leading to hope, to certainty of relief from her cruel bondage to enfeeblement and pain.

These methods are not untried, they have stood the test of experience. Ailments which defy the popular ways of medical appliance, and shame the profession, do great credit to the practical demonstration of these principles, yielding readily and departing finally, not to return. Success is based upon the

CO-OPERATIVE INTELLIGENCE OF THE PATIENT.

She is taught while being cured, and graduates capable of holding her position among the well and useful. "Old things are passed away, all things are become new." She emerges from her diseases, leaving them as wholly external, and no part of the life now entered upon. Previously, add the sum which way she would, the product was always deficient. Apply to this or that school of medicine, this or that practitioner, rearrange the whole column of figures — add one way, add another way— something was always lacking. Health was not the product; and will *never* be. An important factor is missing, which must be supplied, and which is found only *in these principles.* These are a part of medical science, and an invaluable addition to the resources of the art; they have simply been overlooked and neglected. Following the line of investigation laid down in Dr. Taylor's "Diseases of Women," we come into possession of facts which have great bearing upon the practical uses drawn from our study.

The anatomy and physiology of the pelvic organs lay the foundation for understanding their *mechanical relations.* Take

the *mechanical elements* from physiology, and what would become of the functions? How would the lungs play, blood circulate, etc.? Without *mechanism* there is no vital function or activity. Will you illustrate the influence of this mechanical force by showing the

"Interplay of Chemical Force with Vitality?"

Viola: In life, vitality has complete control over chemistry; when vitality abandons the elements, *chemistry* has complete control over them. So, as the powers of life decline, as there is less vital force, chemistry or chemical force asserts itself. This gives birth to chemical remedies in medicine. They are *designed* to re-enforce the *vital* power. I suppose it is not in order here, but it seems strange that when chemical action has the ascendency, or is likely to get control, chemical agents are supposed to increase *vital* force.

Julia: In regard to the force of *gravitation*, I see it as ever present in the system; and does gravitation, like chemistry, assert its power *just in proportion as vitality declines?*

Doctor: It certainly does. Chemistry influences the atoms of the body, and gravitation exerts its power over *masses*. This force of *gravitation* plays a prominent part in inducing disease, and can be made to yield great assistance in the restoration of health. It is obvious that in these *mechanical relations of the pelvis*, important facts are to be found, and the principles involved therein lead to remedial resources of quite a new order.

Viola: "When it will be learned that these remedies are more direct, more appropriate, of more rapid and permanent effect, and useful alike in all the multifarious forms of pelvic disorder, resembling in this respect the air and food which are necessary alike for all—both patients and the profession will undoubtedly cordially welcome and adopt them."

Doctor: While uterine pathology and therapeutics are a distinct branch of medical science, attention has been mainly directed to the palliation of effects, *not* the removal of causes; and, of course, the result was transient relief; symptoms abated for a time, and that is the extent of medical aid in these cases.

It is frightful to contemplate the hosts of females, from

girlhood to old age, who are dependent on their physician for the treatment of these affections. Months and years of time consumed, when supposed cured, old symptoms recur, change of doctors, of remedies, resort to all sorts of remedies, the patient is no better but rather worse at last. Nervous disorders increase in due proportion from the continuous suffering endured and repeated disappointments met in fruitless efforts for cure.

Julia: In view of these facts, the highest service a physician can render is to diffuse a knowledge of the *causes* of these diseases, for only in that way are they likely to be prevented. And who can estimate the amount of suffering escaped? Is it true that the pelvic organs have a peculiar tendency to disease?

Doctor: By no means. If it were, female animals would be liable to this form of disorder, which they are not. It is reserved for the human female to be its victim, though not *necessarily.*

She has power to protect herself from the sufferings to which she is liable, liable only because she does not acquire the knowledge which may be obtained and used in such a way as to prevent these diseases. There is but this one way out of the dilemma in which woman is placed, and will she avail herself of the ready help offered? I believe she will, though it is no light task to lay aside notion, which needs only to be absorbed, no individual effort required, and take up a line of active investigation and use of the reasoning faculties, bringing the results to bear upon the daily life.

Let us now learn how chronic diseases of the pelvic viscera differ from other chronic diseases.

Viola: They do not differ, except in location. There is no

Intrinsic Peculiarity

of these diseases and those arising from other sources.

Doctor: Of what is all disease, wherever located, the expression?

Julia: Of remedial action, consequent upon some *impediment* to the complete expression of the vital power. The sys-

tem, invaded by materials that are not usable, gives local expression to their presence, and this is local disorder.

Doctor: Does the *manifestation* of disease ever exist unsupported? Are not symptoms the utterances of a something which we should seek to ascertain and remove? I answer to the first, *no;* to the second, *yes.* And another thing to consider, is, that *disease progresses.* Not only in degree, but in its forms. So from the same beginning, very different characters are developed, but that does not indicate as many varieties of treatment for their removal. Treatment of uterine affections by physicians, each looking at some local character, rather than taking a general view of the condition, circumscribes the inquiry of each to his particular observation; and is liable, in fact does, limit remedial means to *locality*, ignoring *causes*, of which this is but a local expression. There is, in the organism, *a circuit of mutually dependent processes.* Let us commence their examination, in order thoroughly to understand the *beginning* of disease. Where will you begin?

Viola: Where "inanimate matter becomes living substance, the instrument of bodily force."

Doctor: What are the necessary conditions; how may bodily force be sustained?

Julia: By the presence of *suitable material* brought by capillary blood-vessels. The materials vitality always employs are brought by these vessels, and those it rejects, disposed of.

Doctor: These blood-vessels, then, are responsible for vital conditions. Motion of the fluids, bearing substance capable of supplying organized structures with nutritive and removing waste matters, is a *paramount use. Through what agency do these organized structures — muscle and nerve — express their functional power?*

Viola: Through the agency of oxygen, which arrives, through these same blood-vessels, wherever a part is brought into use.

Doctor: Imperfect and perverted nutrition, then, would mean much the same thing as disease.

In the one case, where the supply of nutrition is less than the local needs — imperfect nutrition, it is plain enough that the deficiency of power and function in any locality is rather a

general than local disease, because it is upon this *general* lack of nutritive supply the local symptoms are sustained. Here the nutritive capacity of the system at large must be increased. *More oxygen* — more breathing.

More Breathing; More Food.

The blood becomes enriched, and the pelvic region shares the functional tone of the whole system. No class of physicians ever depreciates the value of exercise to correct these states; it is only that the means of rendering this agent available have not been apparent.

In the other case, there is overfullness of the vessels in a part, and deficient motion of their contents. The sluggish motion allows the contents of the vessels to be imperfectly changed. Oxygen is brought in contact with them too feebly, the product of the union of oxygen with the blood, carbonic acid, water and urea, is diminished, and there is a partial retention of substance which has not become vitalized — changed, capable of serving the body. *This condition is the chief* of all we have to deal with in overcoming disease of the pelvic contents. You have learned how profusely the ovaries and uterus are supplied with blood through the network of arteries and veins which covers the sides and body of the uterus; also, it is pretty clear what menstruation is, and its attendant hemorrhage, and how in health the uterus returns to its normal condition as soon as the flow ceases; but in weakness of these parts the vessels cannot contract sufficiently, and so they retain an undue amount of blood.

It is agreed by all schools to *relieve the pelvic organs of this over-supply of blood.* The *means* for doing this differ, and all overlook the *almost perfect power* for controlling the various causes of hyperæmia.

What are the definite, tangible causes of this hyperæmic state?

Julia: "They are, primarily, *debility, and consequent deficient action of certain muscles of the chest and abdomen, through which the rhythmical motions of respiration are communicated to the viscera;* secondarily, *the deficient support of the weighty and mobile parts superimposed upon the pelvis.*"

Doctor: Learn this by heart. What terms does our author use in speaking of affections of the womb and its appendages?

Viola: Condition, Position, and *Function.* These do not denote several distinct diseases, but the different ways that disease may be exhibited in the same individual and in the same parts.

Morbid Conditions.

Doctor: Congestion, Hyperæmia. — What do these terms imply?

Julia: Distention of the capillary vessels or any portion of the generative apparatus; simply retention of the circulating fluids in undue amount by the minutest vessels. It implies a diminished vitality, as shown by their imperfect contraction. The facility of the progress of the blood *to* these vessels remains unimpaired, but its progress *through*, as well as *from* them, is more or less impaired.

Doctor: May the ovaries, uterus, vagina, and their lining and covering membranes, or any portion of either of these organs, suffer from congestion?

Viola: They may. Symptoms of various kinds will vary according as the sensory nerves are affected or as function is modified. Muscular power becomes implicated, also will power, as the congestion merges into other pathological forms. Congestion is always present in pelvic disease.

Doctor: Chronic Inflammation: *Is there definable distinction between congestion and inflammation?*

Julia: These terms may designate the same condition, though used interchangeably. The difference is generally regarded as one of *degree* of development of the morbid action.

Doctor: It is not practically necessary to be very precise in these distinctions, the important point being to know that the *true remedial measures* must aid the circulation of the fluids through the obstructed point.

Leucorrhœa.—"Suppose the thinned and weakened walls of the capillaries, which permit the transudation of their fluid contents, are those of the *lining membranes*, the fluids thus escaping cannot be retained by the tissues, but must be con-

ducted off. The canal of the uterine neck, and the vagina, thus forms a channel for such fluids, which, perhaps modified by commixture and decomposition, constitutes the leucorrhœal discharges so common in these cases. The effect of such discharges is to drain off fluids, and thus to relieve the surcharged vessels of the affected region. It is at once the effect of, and relief for, congestion. This is the best circumstance that could occur under these conditions. The ordinary method of remedying congestion and inflammation of the parts referred to is to *produce* a leucorrhœal discharge by means of some local stimulant or irritant applied to the membrane, as near as possible to the point where the congestion is most severe.

"*Ulceration* of the lining membrane of the neck, and also of the mouth of the womb, not unfrequently occurs, but it is not so frequent or formidable a matter as is often thought. Its existence serves to palliate the over-congestion that would otherwise exist, but is in no sense to be regarded as a cause, or considered in itself an evil."

"A day seldom passes," says Dr. Meigs, "in which I do not make such examinations, and, as I make pretensions to be very careful and deliberate in such researches, and as I can see as well as another man, and being much experienced in such matters, I must rely upon my own senses and my own enlarged experience to confirm me in the truth, that an ulcerated os is among the rarest of the diseases of women."

But it is so unusual for a woman who has been under local treatment by doctors, to be told she has no need of topical appliances, but the more interior forces of the system are at fault, and their normal relations must be restored in order to effect a cure, so surprising is this to her, that she is liable to decide uncomplimentarily to the medical knowledge and judgment of such an adviser.

It is a sorry fact that many women prefer to be confirmed in their own misconceptions rather than learn the truth of things; and it is surely advantageous to their physicians in a pecuniary sense.

Hypertrophy.

"Should the surcharged vessels fail to be relieved of their

accumulated fluids by removal in one of the modes described; and should the cause of congestion continue, the plastic elements of the blood are apt to assume some low form of organization, and thus become an addition to the amount of tissue, or at least of the substance of the affected organ or part. The size and weight of some portion of the womb, or its appendages, are thus increased. This effect more frequently occurs in a portion only of the organ, as the anterior or posterior portion of its *neck*, *body*, or *fundus;* or even a more limited part of these divisions. The ovaries are subject to similar forms of affection —the vagina is protected by leucorrhœal discharge from the results of hyperæmia. These forms of disease are almost infinitely varied by location. It is very seldom that the whole of the tissue of the organs, or the whole of its mucous membrane, is affected. Each variation of location will afford variety in the symptoms. A congestion or inflammation of the fundus will give rise to different symptoms from the same condition of the neck. The anterior and posterior portions of either the womb or the neck may also be separately affected. The lining membrane of the body or of the neck may be separately congested, or may afford distinct and characteristic secretion. All these different states depend, however, on the same or similar causes."

Chronic Pelvic Cellulitis.

This may be described as congestion rather than inflammation of the pelvic contents outside the uterus. This form of pelvic disease is manifestly dependent on the same causes as those affecting the whole or particular parts of the womb.

Morbid Positions.— "Like most visceral organs, the uterus is quite mobile, and cannot be regarded as naturally occupying a fixed position. It only rises high in the abdomen when gravid, but at other times its location is quite dependent on the disposition of superior and surrounding organs. The limited size of the pelvic cavity and its lateral ligaments of course restrict its power of change within certain limits." Malpositions of the womb are induced by the same causes that

tend in any way to weaken or produce congestion. They are, in general, *prolapsus*, a depression of the organ below its natural position in the pelvis. This may be of different degrees, but sufficient for our present purpose to distinguish the varieties of misplacement. *Anteversion* describes the bending of the womb forward ; *retroversion*, when it falls backward ; *flexure*, when the fundus and body bend in either direction, while the cervix remains in or near its normal axis. These conditions are merely *effects*, and point to *causes* which, in the light of facts presented, are removable.

Morbid Function.—The conditions we have described in turn become *causes*. Morbid manifestations of function come under the general heads of obstructed, laborious, excessive, vicarious, and irregular mismenstruation, and chlorosis. *Menorrhagia* is one of the most important forms in all its varieties. It is caused by the dilatation of its vessels, which occurs in consequence of hyperæmia, and, like the "House that Jack Built," the hyperæmia may be referred to *lack of the motion* which should secure the return or venous circulation ; this is caused by weight or pressure on the womb, obstructing the flow, or by a bending of the body, flexure, which would produce a mechanical obstruction.

Other deviations of function have the same chain of causes back of them; their successful treatment will be conducted on the same general principles, with such modifications as suit individual cases and temporary needs. Will you tell me in what such treatment should consist? Having carefully studied the day's lesson, you are now fully prepared to answer.

Viola : In removing obstructions, weight, pressure, etc., and restoring the natural motions of all the pelvic region.

Julia : That means a great deal ;— it affects our *dressing*, the first thing.

Doctor : Yes, and probably every habit of the life ; for disease, you have learned, has its origin in perverted nutrition ; and truly curative measures must look to the leading of vital energies into their proper normal channels. And this involves something more than surface work. The *ovaries* are liable to a form of disease peculiar to their structure, and this is *dropsy*. But that is *caused* by congestion, because it would be hardly

possible to find the venous circulation active in this disease, and hence, whatever would affect the other pelvic contents to the degree of inducing a hyperæmic state, must affect the ovaries ; and the true way to remove the watery fluids from the ovaries is to *secure venous circulation.* It can be in this, as in other dropsies, by *urging forward the blood* by means that do not tax the vital power.

Pelvic Congestion, Its Causes, and the Diseases to which It Gives Rise.

Doctor: As I bind my wrist with this handkerchief, you readily see the result is congestion. The arterial blood is very little interfered with; the veins continue to receive blood, they become distended, and even the minutest capillaries are involved, distended, thinned, and weakened. Swelling occurs, because the contents of these capillaries have increased tendency to pass out into the surrounding tissues. In health this same tendency exists, this being the way interstitial nutrition is carried on, but then the amount is regulated by demand of the act of tissue-change. Chemical changes are imperfect in this morbid, mechanical, and vital condition, and finally result in inflammation and pain. It matters not whether this cause is designed or unintentional, or where it operates, the effects continue as long as the cause exists. Suppose an obstructed condition like this occurs in the pelvis, or trunk, will we be satisfied merely to palliate the effects? This ligature in *effect* may be produced by *any* pressure upon the blood-vessels. There are *two causes* which are capable of delaying the circulation in the pelvic vessels. Will you name them?

Viola: One is the inability of the venous vessels to move forward their contents. The other cause of pelvic congestion, also displacements, is the weight of the abdominal contents overlying and pressing upon the pelvic viscera, producing mechanical obstruction.

Effects Caused by Position.

Doctor: The human female is *erect*; all other animals support the trunk parallel with the horizon. In weakness of the abdominal walls it is readily seen what would be the effect.

The contents of the abdomen gravitate towards the abdominal walls, or towards the pelvis, just as the trunk is placed.

The pelvic cavity being continuous with the abdominal, the contents of the abdomen readily obey the law of *gravitation.* Tell me, *what furnishes support to these contents?*

Julia : The pelvic bones and the *abdominal walls. But they do not prevent the effect of gravitation upon its contents.* Hence the pelvic organs are subjected to the pressure of all the abdominal organs above them, and must furnish some degree of support to them.

Doctor : The horizontal position reverses this effect. The abdomen hangs from the domain; its *axis* is horizontal, and actually *lower* than that of the pelvis. *Gravitation* then drags the contents of the pelvis forward and downward *from* the pelvis *to* the abdomen. *What would be the effect of this position?*

Viola : It would remove the weight which otherwise would fall upon the pelvis, remove obstruction which the abdominal organs may have caused in the pelvic viscera, and also make some degree of traction upon the pelvic organs.

Julia : I understand now why it is such a relief to weak people to assume this position. I should think to lie with the abdomen downward would be the very best position, as that *draws from* the pelvis somewhat. But all women do not recognize the effects of gravitation as above described.

Doctor: Nor should they. The vital mechanism of the body effectually opposes *gravitation,* just as vitality controls *chemistry* within the vital domain. It is an undoubted power, and has good or ill effects, according as it is directed. And this is no new thought. How many physicians send their patients to bed on account of uterine derangement,— perhaps not recognizing that the same means which produced the mischief stood ready to help in its removal. Please read this quotation from Dr. Brown-Sequard, recommending the employment of position as an important element in the treatment of chronic inflammation of the spinal cord.

Julia: "Whether at night or in day-time, if he lies down, he ought to place himself on the right or left side, and if he can, he should even lie flat on the abdomen, *so as to diminish by the effect of gravitation* the amount of blood in the spinal cord.

Every physician who has, in this respect, adopted the above suggestion, especially if he has tried it in the absence of other remedies, can testify to the remedial effect of the position described in the particular class of cases referred to." If the muscles have full power to contract, does gravitation have ill effects upon the pelvic contents?

Doctor: No; it is in proportion as vital power is on the wane there is weakness,—that gravitation gets the ascendency. If you would prevent congestion of the pelvic contents, *strengthen the muscles of respiration.* And why? Let us learn the difference between the effect of a ligature that is quickly removed and of one that is allowed to remain. The effect of the first is to urge the vessels to more vigorous action, and rather invigorates, like *exercise.* Now, this is just what the perpetual

OSCILLATIONS OF PRESSURE,

caused by respiration, do for the pelvic viscera.

It is easily ascertained that the motion of an animal's breathing is *greatest nearest the hips*, and the expansion and contraction of the body at this region is more than at any other point; the walls of the abdomen and the diaphragm participate equally in the motion.

What is the effect of this oscillating motion of breathing upon the abdominal contents?

Viola: There is constant change in the degree of force produced by gravitation; as the abdomen and pelvis are continuous, this effect reaches the pelvic organs, to maintain the tonicity of their capillaries, to stimulate the return of their blood to the chest, and to secure constant renewal of vital force in these organs.

Doctor: It is not only the circulatory vessels that are influenced by this respiratory motion. It is on the *mass of pelvic viscera* it contributes sustaining power, aiding to help these organs in their normal position. Here is suggested the means of *cure* for those unfortunate victims of pelvic disease.

CHAPTER VI.

THE DERANGEMENTS OF MENSTRUATION.

Doctor: In their various forms, the derangements of menstruation should be looked upon not as primary affections, but rather as symptomatic of some constitutional disorder, or local displacement. From this outlook we are prepared to enter upon our studies in uterine pathology without danger of wandering into uncertain and unreliable hypotheses. The menstrual function may not be performed, and this deficiency of menstrual action is called Amenorrhœa. We will not try to include every variety, for that is unnecessary; enough to know the main divisions. The menses may never have appeared, and if no morbid condition is attendant upon absent menstruation, there is not cause for alarm or medical endeavor. The cause may arise from congenital malformation. The ovaries may not be formed. Churchill says of the influence of the ovaries upon the menstrual flow, that "It is now believed that, not only are they concerned in the process of generation, but that they are the efficient cause of menstruation. We know that very considerable change takes place in them, as well as in the uterus, at puberty and at the cessation of menstruation." But the ovaries may be developed, and some organic deficiency of the uterus give rise to amenorrhœa. Where the uterus is absent altogether, the development and health of the body may be unaffected; but where the uterus is incompletely developed, or the canal through the cervix, the os uteri, and vagina is in any way obstructed, the secretion may take place, but not being allowed to make its exit, the uterus becomes distended and the health of the patient suffers very much. Paleness, loss of appetite and of flesh, nervous, weak, great pain in back and abdomen, with tenderness throughout that region, increased from month to month as the effort at menstruation adds to the endeavor to force down the retained fluid.

Viola: One can readily judge, then, whether the cause is one of absence of the ovaries or uterus, or of obstruction, by the different effects upon general health. And the treatment in the first case would plainly be entirely let-alone-treatment. In the other, a physician must certainly be called.

Doctor: Sometimes when the menses are tardy in appearing, of the various causes which may be operative, none are approachable by any means which would look only to the local trouble, and not to the state of health throughout the system.

Great harm is done young girls, especially by their too anxious but uninformed mothers, when what Churchill calls "protracted puberty" is put under severe medical surveillance. Even if the subject has constitutional suffering, attention to the general health alone is due, for it is the only availing resource in the case. Far better observe all the hygienic rules of living, and then let the matter rest so far as any worry or ill-advised efforts are concerned.

If the attempt at menstruation is made each month, accompanied with chilliness, pain in the head, back and loins, a sense of weight in the abdomen, nausea, rush of blood to the head, palpitation of the heart, mental depression and irritability, etc., a little treatment may be taken at the time, simply to afford relief, not looking to the appearance of the menstrual show. Be well assured it makes *no difference* whether that follows or not. Do not watch or long for it. A hot foot-bath of five minutes, fomenter applied to the abdomen, drinking freely of hot water, and rest in a warm bed with very little food indeed, will meet the periodical requirements for alleviation; while firm adherence to a course of living which benefits the whole system will effect cure in good time.

There seems to be no ill consequences attending suppressed menstruation in many cases; but meddlesome interference is responsible for the symptoms of ill-health which come on as attempts to force the appearance of the menses are persevered in. Cases are numerous where young girls were drenched with emenagogues, tonics, etc., and brought into confirmed invalidism, not by the malady sought to be cured, but by the remedies applied. This is proved by the fact that full recovery followed when the measures resorted to were discontinued and

looking to the welfare of the whole organism, employed. No especial attention should be paid to the passing over a "period" when the general health is uninfluenced.

Julia: This is all so new to me, and yet solves a problem in my own experience. When at boarding-school, at the age of fourteen, I became the subject of amenorrhœa, and informing my mother by letter, was at once, by her request, placed under the care of a physician. From that time I took medicines daily and thrice daily. At the return of each menstrual period unusual doses of remarkable remedies were administered, and with no good effect. My health, at first excellent, began to fail; when menstruation was next performed it was attended with great pain, and during the three years of my stay at this school I passed through a progressive decline, until it was decided I must forego the delight of numbering myself among the graduates, and took up the wretched pursuit after health. I went home. For months at a time no menstrual show appeared; then it came on with severe pain, and at last I had spasms at each period. My sufferings were indescribable.

I have hoped between times that I might die before the next period occurred, as death was to be coveted rather than life, attended with the agony which I knew was before me. At last I resolved to throw away my daily tonics, iron, emenagogues, and let nature take her course. I went to the country, rode on horse-back daily, all the spring, summer, and even through the autumn months until the weather became quite cold. Lived out of doors, worked in the garden, picked fruit, and ate it too, and improvement was dated from the very first week of my stay there. I had no more trouble with the ailments which had caused me such pain. But until now it never occurred to me that, all the three years at school and the year following, when at home I faithfully dosed myself with medicines, and discouraged my physicians because I grew worse and worse, do the best they could to prevent such a state of things, those efforts were made in the wrong direction; the methods only perpetuated my disorder.

Viola: Had you known the true doctrine of menstruation, as we are now taught, that ovulation is true menstruation, not necessarily accompanied with "show," all the suffering of those months would have been prevented. It was correct enough that your system should withhold the usual accompaniment to that function, when the blood was needed elsewhere to sustain the action of the brain in study, for instance. Doctor, will you please make this clear to us? I remember something about a theory connected with the circulation of the blood.

Doctor: I think it is this to which you refer. Whenever there is tissue broken down through exercise or use of a part, blood flows to that part, conveying nutrient material from which the tissues may be replenished. Hence, the supply to any locality is proportioned to its *use* of material sent there. For instance, muscles that are used are better nourished and grow stronger than unused muscles. There is more blood in them. Now, the functional acts of the body are attended with a degree of congestion in the parts involved in the act. The stomach, in performing digestion, is a common example.

We have seen that the periodical function of ovulation is eminently

ATTENDED WITH CONGESTION,

and in this the uterine vessels sympathize.

If, as the time for the performance of this function arrives, the brain has called for a large share of blood to sustain its activities, or if any other of the tissues demand large supplies for their use, it would follow that less would be spared to attend the process of ovulation, perhaps not so much as to admit of a surplus in the uterine vessels, so no blood escapes the capillaries, and the woman "sees nothing" and panic ensues.

Viola: How marvelous! And to think women know nothing of these simple facts. Why, it would save hundreds and hundreds from a life-time of suffering could this knowledge be spread throughout the land. I am willing to say that if one never did any service to womankind save this, of awakening

the understanding and arousing the reason to act where such important questions are involved, it would be a life-time well spent.

If, to-day, the frightened women throughout this country alone could be induced to look calmly at these simple facts of their own physiology, there would be swept away so large a proportion of their sicknesses, which hang as a cloud betwixt them and the sun, that Millennium Day would surely be announced at once in all the glory of noontide.

Doctor: That day is advancing by so much as each is able and willing to brush a "cobweb from the sky."

But to return. Simple suppression of the menses, of itself, cannot be called abnormal.

Dr. Huston, quoted by Dr. Churchill, says: "When amenorrhœa exists alone, without any other functional derangement, it demands no treatment, and should not be regarded as a disease. Many well-authenticated cases are on record which prove the truth of this remark. I know a maiden lady, who is now half a century old, who never menstruated more than once or twice a year, and has very rarely been sick.

"Many like cases have come under my own knowledge, and where there never was any catamenial flow, and those women bore children and were healthy."

Further: "When amenorrhœa exists in connection with other functional disturbances, it then claims our attention as an evidence of disease, but why should we regard it as the *cause* of those other disturbances, when, in reality, it may be only an effect or only a concomitant?"

But it may occur suddenly, as from exposure to cold or damp or any enervating influence. Then it gives rise to acute inflammation with attendant symptoms — headache, thirst, aching of the back, abdomen, and sometimes oppression of the chest, and choking sensations, etc.

This should be treated like any cold with local inflammation. Balance the circulation, apply warmth to the feet, hot foot-bath at first, compress over abdomen, and, if chilly, place fomenter over this; in fact, make the patient comfortable.

Chronic Suppression

of the menses sometimes follows an acute attack, and is attended with a general failure of the vital powers. Leucorrhœa is apt to become permanently established, and most positive remedial measures will be required to bring up the system from its low state.

Irregular

Menstruation occurs in a very large class of cases, and there is no need of becoming worried over the vain attempt to establish regularity.

The best of all to do, is to live right and let the function take care of itself.

Vicarious Menstruation.

In some cases of suppressed menstruation, where, of course, the monthly menstrual act is performed by the ovaries, but the uterus does not act its usual part in supplying the "flow," some other part of the system discharges the duty, and this is Vicarious Menstruation.

This follows neither law nor order. It comes on whenever it pleases, takes place from the lungs, stomach, bladder, nostrils, and other parts of the body. The first hemorrhage is liable to be the only one, but it may also occur for months, or even years. It is impossible to explain the cause of this extraordinary effect, nor can we tell why it is not followed by more serious consequences than those which result from mere loss of blood.

There need be no fear entertained as to the liability of the organ or tissue which takes on this action being subject to disease afterward, and all that can be done in these cases is to balance circulation and fortify generally against weakness in any part of the organism.

Dysmenorrhœa.

What does that mean?

Viola: We poor victims of its tortuous grip know very well: it means painful menstruation. It is first cousin to neuralgia, and has the family characteristics. There is generally

a persistent feeling of cold from head to foot, the extremities refuse to be comforted with applied warmth.

The head aches, sometimes before the "flow" appears, and again afterward.

Indeed, all the symptoms vary in this way. And the pain sometimes streaks down the back and thighs, and to the lower abdomen. The pain is constant in some cases, again it comes in paroxysms, with intervals of rest. Bearing-down pain is very distressing. "Almost all women suffer so much pain and disturbance from menstruation, that we may almost venture to say that menstruation, like parturition, lies in debatable ground between physiology and pathology. Part of the pain of dysmenorrhœa is ovarian, and that which is uterine is often symptomatic of general disorder."

Doctor: There is often a peculiar membrane formed in the uterus in some cases of dysmenorrhœa, resembling that which we see in croup. This is thrown off in shreds, and sometimes whole. In one case I found the patient, a young lady, suffering from the most excruciating, tearing, bearing-down pains of labor; finally, a little sac was thrown off, and examining it closely, this was found to be the size and shape of the uterine cavity. The patient was relieved, but much exhausted from the severe pain. The case was afterward cured.

There is a form of painful menstruation which is attended with more inflammatory symptoms, is more acute, comes on suddenly, with headache, restlessness, chill and fever, etc.

Great pain in the back, intolerable aching of the limbs, weariness, light and sound unbearable; the skin is usually hot, but sometimes cold and clammy.

There is nausea, and undue secretion of mucus, the mouth fills with it. Great distress in back of the neck and down the spine.

Delirium frequently comes on for a short time. The false membrane may or may not be secreted and cast off in shreds, or whole, etc.

In these cases there is always much congestion and engorgement of the uterus, and such is the sympathy between that organ and the mammary glands that pain and swelling often accompany this variety of dysmenorrhœa.

The treatment in these cases must be very prompt. Very hot sitz and foot bath of ten minutes or more, then rub dry and cover up warmly in bed, with bottles of hot water to the back and feet, fomenter over the abdomen, drink hot water.

Soon as the pain subsides somewhat take a full enema of hot water.

If the pain does not subside in good time, repeat the hot bath. This is not usually necessary. Keep very warm and quiet, and do not eat a morsel of food until free from pain, and then only a small amount of hot, thin gruel at first.

The *cure* for this comes through the same means as endow the organism generally with power to express health throughout the domain.

Excessive Menstruation.

Julia: I am interested to learn what this disorder of the menstrual function is, and have looked up the symptoms, finding a long train of them, indeed. "Exhaustion, languor, dislike of exertion, weakness across the loins and hips, paleness, headache, etc. As the disease progresses all these symptoms are aggravated, and stomach and bowel derangements ensue."

Doctor: Nor is this all. Great nervousness, melancholy, and all the train of symptoms which follow upon such derangement of health as is comprised in the one term *anæmia*, no matter how produced.

The disease is rather passive than active, and consists in an unusual and excessive congestion of the uterine vessels at a period when the menstrual function is to be performed, and the profuse discharge is the result of this severe congestion and rupture of some of the blood-vessels which are distributed over the lining membrane of the womb. It is difficult to detect the cause, except attention is directed to the whole history of the patient's life.

But this does not bear much upon the case practically. These are obstinate cases to relieve, and tedious to cure, yet are curable.

Doctor: You have done well. As to treatment, it is not always easy to restrain the hemorrhage during the attack. Vaginal enemas of water so hot as to be almost unbearable,

taken once in three hours at first and later, as the flooding is somewhat checked, once in four or five hours, and less, owing to the control gained over the hemorrhage.

It is much to be preferred that the patient be situated so as to take this enema in a lying-down position, which can be done conveniently by using a bed-pan of rubber, inflated and placed on a folded blanket or whatever will allow the hips to be elevated. This pan has a tube which allows the water to pass out continuously into a vessel below, so any quantity of water may be used without overfilling the pan.

I know of no means so efficacious in controlling hemorrhage. It will very rarely disappoint, and then not wholly.

The bowels should be carefully attended to in these cases; move them by hot enema daily if necessary. The cool compress may be applied to abdomen, cover with dry flannel.

Feet must be kept warm. Quiet of both mind and body must be secured. Very little food is admissible.

These cases are *cured;* sometimes they yield almost unwillingly, but there are forces greatly in the ascendant over disease, and, in harmony with these, cure is perfected.

Chlorosis.

Viola: Chlorosis is a very severe form of disorder, we learn, and is eminently caused by bad nutrition, which induces this anæmial state of the blood.

By some authors it is attributed to disease of the liver; others think it originates in a deficiency of the blood, in altered quality, and its vitiated condition. It occurs in males as well as females, but is more commonly found in the latter. Sedentary habits, close confinement indoors, mental depression, etc., are very influential in its production. It is distinguished by the peculiar color which gives it its name, and the symptoms are by no means obscure. Headaches, dyspepsia with its train of aches and ails, nausea, and often severe vomiting, distressing nervousness, offset by greatly diminished sensibility, etc., are among its characteristic symptoms.

Julia: But the case is curable; such are recorded in this case-book of yours, and it seems easy enough; for only remove

causes, and effects will disappear. If I were to venture to prescribe, I would take up a line of treatment suited to dyspepsia.

Doctor: That is suitable; any one can do the same, especially if informed of things you have been learning throughout these lessons. And now we will consider

Menopause — Change of Life.

If you understand the true theory of menstruation, it will not be difficult to learn what the cessation of this function means. To impress the cause of menstruation more fully upon your mind, you may read this from Dr. Thomas.

Viola: "It is now an accepted fact with most physiologists, although still contested by some, that the periodical discharge of blood from the uterus, which is called menstruation, is merely a uterine symptom of the discharge of the ova from the ovary by rupture of a follicle. After the period of puberty has arrived, one or more of the follicles of each ovary burst every month by the following process: A congestion, or hyperæmia, occurring in the ovary for some reason beyond our comprehension, causes an excessive secretion by the walls of the follicle, in which a miniature dropsy takes place. This goes on to rupture and escape of the liquor folliculi, blood, granular cells lining the ovaries, and the ovum. The nervous supply to both uterus and ovaries is excited by this, and one of the results of such excitement is contraction of the delicate middle layer of uterine fibers which surround the network of minute vessels enveloping and penetrating the uterine structures. This throws the vascular apparatus into a state of erection. Great engorgement occurs on the surface of the uterine mucous membrane, and probably on that lining the Fallopian tubes; they rupture, and a flow of blood takes place.

"These elements are concerned in that discharge: 1st, ovarian irritation, excited by ovulation and transmitted to the nerves governing the muscles constituting the middle coat of uterine fibers; 2d, consequent rupture of the blood-vessels of the mucous membrane of the uterus and escape of blood."

Doctor: Is it any wonder that the power of germ production, involving, as it does, the co-operation of a set of marvel-

ously endowed organs, and a series of functions equally wonderful, should, as it ceases activity in the menstruating and gestative life, and ascends to the realm of the heretofore unknown to experience, subject the uterine nerves and arteries, with their numerous sympathetic branches, to great alternations of state. During the past thirty or forty years the life-forces have been engaged in procuring elements which would sustain all their functions, and even allow of the habitual monthly waste of blood, whether essential to the welfare of the system or not. *Now*, at the "change of life" there is either a loss, a shrinking and shriveling of body as well as soul, by so much as this "climax of life-force" means when it ceases, or the life of the subject takes on new vigor, a new start in life, and the coming years renew, rather than decline, the health and activities of the whole illuminated being.

It may, without surprise, occur that disturbances throughout the system arise, as the inflowing higher forces come to the unready soul and body, just as any inflowing force causes perturbation in the natural as well as psychic realm, as even the rapid inflow of water into a jug causes gurgling, etc.

And these perturbations are called disease, and are met with exhibitions of drugs!

Julia: Shall I enumerate symptoms? The books are so provided that one can "get a plenty."

Doctor: It is not necessary. The one who is now at the approach to or within this charmed circle of influences, and is not prepared physically, mentally, and spiritually, will, on learning its true meaning, begin at once to make ready for the expanded life before her, *not* by swallowing drugs, or otherwise appealing to physical aids, but by opening every avenue of her being to the pervasive life which makes her one with all humankind, and a child of the Most High.

Such a one will not be assassinated by the idea that she is exposed to evils which are necessary accompaniments of this period, but will rather welcome with joy every incident that hints of the fullness of spiritual perception, power, and completeness which it is hers to attain.

Displacements of the Uterus.

Viola: Velpau says: "I declare, nevertheless, that the majority of the women treated for other affections of the uterus have only displacements, and I affirm that eighteen times out of twenty patients suffering from diseases of the womb, or some other part of this region, those for instance in whom they diagnose inflammation (engorgement), are affected by displacements."

Doctor: You have learned that the uterus has great range of mobility, so great indeed that because it varies in position it need not be considered displaced; but when we consider the influence which the *condition of its supports* has on its position, it is no wonder displacements are truly so common. What are the natural supports of the uterus?

Julia: The ligaments, abdominal walls, and vagina.

Doctor: We will notice the three general forms of displacement: Prolapsus, Anteversion, Retroversion. The first is a direct descent of the uterus below its normal position. The next, anteversion, is a bending forward of the body or fundus against the bladder, and in retroversion the uterus bends back against the rectum. The symptoms vary according to the form of displacement.

Direct prolapsus gives a bearing-down, disabling pain and uneasiness, producing inability to stand and walk. Anteversion would give, in addition to the symptoms of prolapsus, a feeling of pressure upon the bladder. Retroversion would be characterized by the pressure being felt more in the lower part of the back, also, the fecal discharges more or less interfered with. All the features of displacement are too well known by women to need the recital of their woes recorded here.

Says Meigs: "The uterus, fallen so far out of its proper position, becomes a disturbing force to the economy. I have already told you again and again that the nervous system of the womb and reproductive organs allies itself intimately to the system of voluntary and ganglionic innervation of the economy; and it is as easy to suppose that a woman should feel well and comfortable with a dislocated humerus as with a

dislocated uterus, for I deem it perfectly true to say that a uterus fallen from its just level in the pelvis is a dislocated uterus — a term that expresses the idea of the case more completely and more trenchantly than in softer terms, uterine deviations and uterine displacements."

The plan of treatment may be easily selected from our lesson on Principles in Pelvic Therapeutics, but it will not be out of place here to say a word regarding the pessary, so commonly used.

This instrument is intended to supply to the displaced uterus that support which the weak and flabby abdominal muscles, the relaxed ligaments, and prolapsed vaginal walls fail to yield.

Introduced into the vagina, it may for a time give comfort, but often is from the first a source of pain and annoyance. At best, no part is brought up by this procedure to a state of self help and tone, but experience proves that the vaginal walls become more and more relaxed, requiring greater and greater size of the instrument, until the limit is reached, congestion is invited, as that is the natural mode of the tissues in ridding themselves of an offending foreign substance, and the patient finds herself no better, but worse.

Julia: It seems that the pressure from above, the weight of clothing as well as its tightness, ought to suffice.

If, in addition, the pessary is introduced, the poor uterus is between two opposing forces, and could the pressure upward be sustained any great length of time (which fortunately it cannot, for the vaginal walls are ever ready to give way and allow the uterus a chance to move somewhat), the condition of the uterus would be expressed in the very unpoetic terms, "flat as a pancake."

Viola: Happily there are natural, true methods which afford certainty of relief from this painful deviation of the pelvic organs, and so every prolapsed, turned, depressed womb of the land may well "take heart," for it may be enabled to "rise again."

CHAPTER VII.

PRINCIPLES AVAILABLE IN PELVIC THERAPEUTICS.

Doctor: What is manifestly a leading purpose of the body?

Viola: To evolve force — the force employed to overcome its own inertia and the resistance of external objects. The intelligence and will guide this latter purpose, and there also are modifications of force.

Doctor: What is the measure of the health of the body?

Julia: Its capacity completely to secure the above ends.

Doctor: What do symptoms of disease appearing in the pelvic region denote?

Viola: Defective nutrition and activity in the abdominal organs. To perfect the nutrition of these parts is *to sustain the visceral weight, remove capillary obstructions, establish interstitial change, and enable the organs to return to their normal condition after the monthly menstrual congestion.*

Doctor: The remedy, then, that will increase the nutrition of the parts that are suffering from disease is the one that may be relied upon to secure a return to health. *Do local remedies do this? and if not, why?*

Julia: Only to a very limited extent. Because one part of the body is dependent on other parts and the general system, and no one part is independent of others or self-sustained, as the practice of local remedies implies. Parts of the body apparently in no way connected with other parts maintain their vitality through connections with them.

Doctor: Why can the recovery of disordered parts be secured only by invigorating and increasing the vital energy of the whole system?

Viola: Because the body is a whole

INTERDEPENDENT MECHANISM,

not an aggregation of distinct individualities. And this makes the condition of bodily recovery, health, and power

inflexible, from which there can be no safe departure ; and this condition must be complied with, or there can be no certain or permanent cure of disorders that *seem* local, only because the connection of part with part, and the dependence of each organ upon the vigor and soundness of the entire system, is not observed by the unpracticed eye.

Doctor: How may the aggregate powers of the system be regarded?

Julia: As a reservoir of force capable of being called in any direction. In this view we contemplate, on the one hand, *force needed*, on the other, *force supplied;* the equivalent forms of expression are *disease*, *remedy*.

Doctor: How does Motion become remedial?

Viola: In two ways: one is by *active motion*, when the muscles are caused to act through the will ; the other is by *passive motion*, when a limited portion or region of the body is rendered physiologically active by external causes.

Doctor: What is the special use of active movements?

Julia: To give direction to the powers and resources of the system in such a way that the whole system is caused to contribute to and perfect the vital power of a limited portion.

Doctor: What is the special use of passive movements?

Viola: To renew and refresh the circulation, and therefore the nutrition, of any selected local point. To cause the blood to flow in increased amount *from* any designated part. To cause the blood to flow in increased amount *toward* a given part. To cause interstitial local absorption, *and the reduction of dropsical and other swellings.* To cause contraction of capillaries previously distended. To secure relief from pain. To correct and perfect the products of waste passing from the body. To increase the use of oxygen by the system. To supersede other means for securing local depletion, counter-irritation, and revulsion.

Doctor: In chronic diseases how may nutrition be increased?

Julia: By increased use of oxygen by the system : the failure of the respiratory muscles, which always precedes and attends pelvic difficulties, *implies deficient use of oxygen*, and the consequent accumulation of insufficiently oxidized wasting products.

Doctor: Where may the "far-reaching universal remedy" so long coveted for invalid women be found?

Viola: In applied *Motion*, manual and mechanical, to which the term

"Manual and Mechanical Massage"

is now applied. As it is not irrelevant to our purpose, allow me to sum up the advantages of Mechanical Massage as given by Dr. Taylor in "Pelvic and Hernial Therapeutics."

1. The mechanical pad is under the absolute control of the patient, however feeble. He adjusts himself to its action almost instinctively, and its action is therefore never otherwise than agreeable, for the least approach of undesirable sensations causes the patient to desist. The slightest change of his position changes the action, and therefore his feelings.

2. The expenditure of energy in mechanical massage serves almost wholly to promote nutritive effects in the muscular masses; the consequence of this is to counteract excessive nervous manifestations. This effect is secured by the compression of the pad, which therefore does not traverse the nerve endings in the skin, and does not incite nerve action and nerve nutrition. Mechanical massage, therefore, causes the muscular action and power to increase and the excitability of the nerves to diminish.

3. The power of mechanical massage is practically unlimited; the patient is never depressed by a sense of the fatigue of the assistant or operator, as is liable to be the case when the process is applied by a faithful assistant of limited power. The capacity of an ordinary invalid to *receive* communicated energy is many fold that which any assistant can *give*, especially if the rapid and stimulating kind is attempted.

4. The rate of motion the hand is capable of transmitting is comparatively limited, and can hardly practically reach two hundred changes of motion per minute; and this rate, and indeed any rate, cannot be long continued. The usual rate of mechanical massage is between one thousand and one thousand five hundred per minute. It follows that therapeutic effects of a higher order, and practically most desirable, are connected

in the higher rates of motion communicated by the unlimited resources of mechanical massage.

Some of them may be briefly enumerated :

Heat.

Mechanical massage develops heat in the tissues in liberal abundance in the most feeble and frigid invalid. The transformation of motor energy to heat energy among the vital tissues is independent of vital action, but is practically of greatest utility, for the tissues appear to acquire the power thereby of spontaneously producing the desired increase of heat.

Defective Oxidation

is a constant feature of chronic invalidism, especially those forms manifesting specially in the pelvis; the local symptoms are in part due to the presence of excess of sub-oxides in the system at large, finding in the pelvis "a local habitation and a name." The evidences of increase of oxidation and diminution of sub-oxides, which of course diminish the embarrassments of pelvic disease, consist in the increase of quantity and improved quality of the urine, increased transpiration, improved complexion, etc., which rapidly follow mechanical massage.

Specific Relations to the Nerves.

The power of manual massage to suspend local pain has been utilized from time immemorial in an empirical way. This effect of the hand does not approach that of mechanical massage. There is nothing equivocal or dubious about this effect, and scarcely any respecting the scientific explanation of the fact.

Doctor: Experience in the application of mechanical massage to the cure of pelvic affections so triumphantly proves its value, that it is safe to predict for this medical agent a universal welcome by woman, just as soon as she becomes self-instructed, intelligent, and thoughtful in regard to remedial methods particularly adapted to her needs. I believe this medical factor is a direct gift to woman, from out the abundant store of blessings which come with this New Age.

Effect of Twisting Motions of the Trunk.

Doctor: The disadvantage of the upright position is having the abdominal weight *above* instead of *below* the pelvis.

Animals are exempt from this, as though guarded by their lack of the capacity which belongs to human beings, upon whom rest greater responsibilities. But there is an advantage. The upright trunk can be twisted upon its axis; a four-legged creature cannot do this. We will study this act.

What part does the spine play in this twisting motion?

Julia: It prevents any shortening effect. The ribs prevent the chest from being contracted by the same acts. Then the region of the abdomen is alone diminished in size by the motion; and the chief muscles called into action are those of the abdomen. The cavity of the chest *remaining quite expanded*, the pressure upon the abdominal contents forces them upward, as also the contents of the pelvis.

Doctor: Now for practical inferences from what has been observed. 1. "*The abdomen should participate in the ordinary motions of respiration.*" Whatever hinders is a wrong. 2. "*The power and habit of twisting the body upon its axis should be carefully maintained.*" This will be done unconsciously by the one who is actively employed—house work, garden work, climbing, walking, rowing, and many, many ways involve these motions. No *woman* can afford to neglect or ignore these two "inferences." Slowly and insidiously her health will be undermined. This is *mathematical*, it is sure. Because these causes are unobserved and neglected, their aggregate power is not realized until diseases *most difficult of cure* are fastened upon the organism.

In diagnosing a case of pelvic disease, I always ascertain the condition of these abdominal muscles, and it is painfully true that scarcely an exception is found to the rule of "*abdomen undisturbed by respiration.*" These deficient motions must be restored if there is any hope of curing the case.

What wonder there are so many uncured cases all about us. Effects may be ever so skillfully met, but the causes are still operative, and will remain so until *by direct cultivation* these natural, reciprocating motions are restored.

Julia: I find the books give other causes than those we have assigned as causes of pelvic disorders. Pregnancy, abortion, displacements, cold at the menstrual period, efforts to prevent conception, to produce abortion, etc.

Doctor: Any more? Let me ask why pregnancy should induce uterine disease any more than *breathing* should induce lung disease? It is just as natural a function. If, as the history of numbers of cases which I have treated testifies, uterine disease follows parturition, I decide it was there before or the causes existed independent of the pregnancy. "Displacements"—why, they are congestion—"concreted." Of course, they cause congestion, and congestion causes them. "Cold"—yes. Catarrhal inflammations are as liable to occur in the uterus, perhaps, as other localities, but not more so. "Abortion,—preventing conception."

Julia: I rather wish this to be true. I would like to visit upon the one who would do such crimes just such a punishment until they cried out in sincere repentance — *enough.*

Ordinary "Exercise:" Its Influence on the Health of the Pelvic Organs.

Doctor: From what two causes do motions of the body and of its parts proceed? "One is the influence exercised by the will over the muscles; the other is spontaneous, proceeding from organic needs, independent of the volitions."

We have seen that hyperæmia of the pelvic organs is induced by deficiency of the motions originating in both these sources: therefore, supply motions adapted to the peculiarities afforded by these cases. But women thus afflicted do not like exercise; it makes them worse. This is because they do not take in its full scope. Walking, or a little light non-muscular work, is their idea of exercise. There are myriad forms of exercise, and it is capable of adaptations to the most inactive and sensitive, and it is a mistake to avoid exercise in general because certain kinds are not agreeable. Ill results come from lack of intelligent applications of this power, which is as potent to elevate as to depress, and as effective in directing the vital support *from* as *to* any part of the organism. The

circulation, nervous force, and nutritive materials are as easily directed *away from* as *to* a certain locality. What is the difference between

Exercise in Health and in Disease?

Viola: In health the *equal* exercise of *all parts* of the body produces an equilibrium of the different parts. In disease, the *unequal* exercise of *selected* parts is needful to attain the same end. *Nutrition and supply follow absolutely and closely on demand*, whatever direction this may take.

Doctor: Then the maintenance of health becomes a question of maintaining the equipoise of the physiological system through the *intelligence* and *will*. The kinds of exercises that are competent to produce special results in chronic maladies are such as attract the blood and energy *from* the spinal cord, and such as secure the *elevating* and sustaining effects of the action of certain muscles.

General exercises, those which secure action of the chest and walls of the abdomen, are useful, and in cases of local congestion the exercises must not be such as tend to converge the circulation in the pelvic region. If the transverse and oblique muscles of the abdomen and all the muscles of the chest are called into action, the removal of the weight of the abdominal contents from the pelvic viscera and the unobstructed circulation of the blood are assured: the oxidizing process so indispensable to the evolution of power and the removal of dead matter is secured to its full extent, and vigor and health are the natural consequences. If *self-help* is not possible, because of feebleness or other circumstances, the case may have the same results through prescribed and administered exercises.

Instrumental Support of the Uterus.

Doctor: The mechanical contrivances invented with design to sustain the uterus from below will need no special description, for those who have experienced their effects are sufficiently informed of their mechanism; those who have not need not wish to know. There is at times a sense of relief expe-

rienced when the supporter is first applied. The sense of dragging is removed, the abdominal contents are held up, and breathing is consequently easier. But the motion derived from respiration, affecting the contents of the abdomen, is prevented. *External* mechanism securely holds up the abdominal contents, but the *vital* mechanism is allowed to drop into disuse. The vital mechanism should be maintained to the exclusion, in the main, of any method of repressing and discouraging vital action. The use of the instrument does the latter. The muscles, not called into action, must gradually become weak; and the victim of this treatment finds herself utterly dependent on this false support. It is often with the greatest difficulty a patient can be prevailed upon to abandon it for that reason. She is deceived in regard to its effects, and does not readily understand that by depriving the uterus of its natural support, it does not restore, but actually tends to displace that organ.

Viola: The *real* support is the abdominal and respiratory muscles; if their nutrition is prevented and power diminished, by whatever means, it is injurious. It also follows that those oscillating motions of the contents of the pelvis and abdomen, so essential for maintaining circulation and preventing congestion of these parts, are prevented by the instrument.

Doctor: The *pessary* is another instrument, but this is designed to be introduced into the vagina. This fails to give the intended support, and in fact gives none unless it is so adjusted as to be sustained by the pelvic bones. In case of the most complete adjustment, the uterus is elevated to a very moderate degree, much less than exists in health. Understanding the condition for which this aid is applied, weakness of those parts which support the uterus and its appendages, and that the local affection is only a result of this primary condition, it follows that *concealment* and not *cure* of the disease attends upon the administration of instrumental support.

Julia: Why, then, do invalid women so commonly resort to this, and with the sanction, even the advice, of their doctors? I think it must be that *something* must be done, and that quiets the demand of the patient for help.

Doctor: It argues the limited resources of the physician. The ignoring of these facts, also: The pelvis is not an inclosed space; the lower boundary is practically left open by nature. Whatever support is available must come through the active muscular support *already provided.* The pessary is not only unnecessary, but a hinderance to recovery, for several reasons. If large enough to answer its intended purposes, it distends the vaginal walls extremely, and in time destroys the contractile power of these walls. I have seen numerous instances. It is a foreign body in the vagina, just as much as a splinter in your finger, and the final results are not different. Nature makes persistent and continued effort, in her own way, to rid herself of the intruder. Obstruction, congestion, ulceration follow. In case of the vagina, there is another loss. A secretion is established which becomes decomposed within its walls. Absorbed into the blood, it poisons that circulating fluid. Reacting on the vaginal membrane, ulceration of any portion may follow. I have removed pessaries which were actually imbedded in ulcers. Then, the malposition of the womb is liable to be changed by the pessary into a worse one. You see, the pressure of the abdominal organs upon the uterus from above is not relieved by the pessary, and it supplies additional pressure from below: what follows but a "doubling up" of the womb between the "world above and the world below"? Those cases of incurvation are vastly

More Difficult of Cure

than the primary difficulty. There is another effect which I am tempted to say is worse — that visited upon the nervous system. Nervous with uterine disease is always an existing complication, but the pessary so aggravates this condition that the general system is brought into alarming disorder; the mind seems to apply its whole power upon the morbid sensations centered at that local point.

Julia: And what wonder? What, with backache, headache, spinal irritation, indigestion, languor, nervousness, depression, general uncomfortableness, can a woman do but — regret she was not born a man?

Doctor: I would give "no quarter" to mechanical supports. They do nothing towards removing the cause of the difficulty, even were their temporary effects salutary. *Restoration of the natural support* means *cure.*

LOCAL EXAMINATIONS AND APPLICATIONS IN UTERINE DISEASE.

Doctor: While those who participate in these studies do so with no reference to becoming practicing physicians, it would appear scarcely essential to discuss some matters which are wholly in the hands of the profession, were it not that every woman should have so much knowledge of them as will enable her to form an intelligent judgment, as they vitally concern her welfare, and have consequently an influence upon society in general. To begin: *Why, in uterine disease, does the womb become the focus of thought, the center of the mind's attention?*

Viola: It matters not where pain is located, the powers of the mental faculties are liable to be subordinate to suffering, and nervous action is concentrated at its seat; and if this is associated with some mystery, as in the case of the pelvic organs, an almost superstitious regard attaches to them; the imagination aids in the difficulty; thought as well as feeling are centered there, and relations of cause and effect become in her ideas quite inverted; she believes the uterus the cause of all her troubles.

Doctor: Through what channels are uterine diseases derived?

Julia: Through the same channels as uterine health, through the connection of the pelvic viscera with the whole general system.

Doctor: Physicians too frequently countenance error in the opinions patients entertain of their ailments, by resorting to local applications; fixing the idea that causes are to be found mainly in the pelvis instead of throughout the system. Again, local remedies obtain a place in uterine therapeutics because they are so much more easily administered; rather, the patient thinks much is being done, and is satisfied. Her physician does not care to divide attention with other parts of the organism where causes reside, while effects are so easily medicated. The cause of disease is allowed to remain, while only

its consequences receive attention. Do not consider my position in this matter so ultra as wholly to discard local treatment under all circumstances. I merely consider it as applying to only a portion of the actual conditions. Even if good, it is

NOT SUFFICIENTLY FAR-REACHING.

It is not curative, but only a help to curative means. I do not use substances which have any great chemical power. These do not embody "curative efficacy;" milder measures are greatly to be preferred. *What is the prominent purpose of these applications?*

Viola: Local depletion: the most direct agencies are employed—scarification, leeches, caustics, etc. They are made to the vaginal walls, the mouth of the womb, cervical canal, and often to the lining of the cavity.

Doctor: Caustic applications are applied only to remove disorganizing matter; they are not supposed to have a curative effect. By converting an ulcer into a fresh wound the healing tendencies are brought into activity. This is the very best view to be taken of their effects. There are materials far better adapted to this end. Better still, *prevent this morbid material from forming*, and you have no need of even the *best* local remedy. All other expedients are temporary. Treatment which is based, as all treatment should be,

ON THE MOST IMPORTANT FACTS

of pelvic pathology, which takes into practical account the *causes* of pelvic congestion, out of which all the various forms of uterine disease must proceed, brings the most gratifying results to both physician and patient: *diseases readily disappear.* And not those only which are in their incipient stage. Such cases rarely find their way to the adoption of these methods so directly; they suffer "many things of many physicians," until their conditions are the most difficult and trying; and so these radically curative methods are observed to possess a potentiality *not elsewhere found.* The very "best results may be attained *without* the use of topical medication of any kind whatever."

Julia: What is the effect of even simple applications repeatedly made to the womb ?

Doctor: They tend to produce a morbid state of the nerves of the whole pelvic region, and through these the whole nervous system. There is a great difference between cases treated mostly by local measures and similar ones without resort to these appliances. Pain and uncomfortable, even distressing, symptoms are greatly in the ascendant, and often increase in spite of sedative applications made to the organs.

The functions of the pelvic region have most profound sympathies — the generative system is a great center of nervous power; it is at least supposable that morbid impressions made on these nerves by topical applications should produce an effect not confined to the pelvic region, but radiated throughout the nervous system. This nerve disease, then, is added to that of other tissues, and it is a well-known fact that nerve-substance recovers much more slowly when injured, no matter in what way, than any other form of living tissue. The forms which nervous disease, thus induced, are most likely to assume are local and general neuralgia and perverted and extreme sensibility. The cerebro-spinal system becomes affected, emotional activity being irrepressible at times. Surely such consequences are sufficient to detract from the practice of making local applications.

Viola: Especially, for the cure of disease which does not have its origin at the points appealed to. Does not the

POWER OF THOUGHT

affect these cases? Forcibly directed by the senses to this locality, as is done by means of frequent local applications, this power must be perverted to the increase and perpetuation of the malady. Constant watching for sensations, no matter in what organ, does this. I can ruin my digestion very promptly by thinking about my food, whether it will agree with me, was of right quality or quantity, eaten rightly, etc. Does not the same principle apply to the uterus?

Doctor: Assuredly; and there is another consequence of prolonged local treatment in pelvic disease, a real "speculum

mania." Truly, the subjects acquire a delight for the treatment. It is not only a *possible* habit. It is real. I have treated such cases, have been implored by them to make vaginal examinations; they have sought to deceive me into gratifying their wishes, by affecting to be suffering some new phase of agony, which only the speculum would be likely to reveal. A patient thus afflicted, who had been bed-ridden seven years, and treated nearly every month of that time through the speculum, was informed by me that she must *herself* strive against this emotion; but when I refused afterwards to continue local treatment for the uterus, she feigned *ovarian disease*, sent for me to announce her discovery, and said, "Doctor, I suppose you will have to make an examination with the speculum." I gleefully referred her to a book on pelvic anatomy, that she might not fall so headlong into the next ditch she dug for me. But I never had from her any more importunities of the kind; she finally recovered. I have treated these cases, and wondered at the tardiness of recovery, when they afterward confessed to having gone to other physicians during the time for local treatment, as I would not administer it to them. One young girl, a victim to this local treatment for three years, begged me to treat her while under my care, and finally becoming angry, said, "If you will not give me local treatment I will use the speculum myself." The case-book of any physician who has had long experience in pelvic diseases will afford abundant testimony to the existence of these morbid emotional states relative to this matter of local treatment. Of course, these are only frequent results of the *abuse* of it; but they show its possibilities in all cases. Here is something to the point, quoted by Dr. Taylor from a medical journal. Please read it.

Julia: "Now let us come home and bring to judgment a sin in the family. Within the profession there is a species of quackery which is advertised not by the printing-press, but by the uterine speculum. There prevails very extensively among our women a singular disorder of which the most prominent symptom is a passion for uterine exploration.

"To some extent, medical practitioners are responsible for the general prevalence of this malady. It is easy for sensitive females to persuade themselves that their afflictions, from the

toothache downward, are due to falling of the womb, or ulcerations, or tumors; and he is the sharpest doctor who first detects the difficulty. Here comes in the charlatan, to exaggerate the disease, if there be any, and to beguile the patient with promises of cure. Henceforth the speculum becomes to the poor woman an essential part of the routine of life. Caustic, the knife, and various manipulations look like work; and she is charmed with the industrious and energetic attentions of the professional mechanic. By-and-by the bubble bursts, and for all the good that has been done by subjecting the uterus to a course of torture, its proprietor might as well have adopted the treatment accredited to that miracle of scientific skill, Li-potia, namely, the application of a blister to the crown of the head, to raise the fallen womb to its place.

"It is to be hoped that the fashion of women to have recourse to local treatment has passed to its culmination, and with it the professional mania for persecuting that organ. The highest authorities have taken the back course, and condemn their own uterine surgery in some respects.

"We may, therefore, indulge reasonable expectations that this form of treatment will henceforth be limited to its legitimate and restricted sphere."

Another, from Dr. George T. Elliott, as reported in a New York medical journal: "He was profoundly convinced that one of the most important elements of success in solving the difficult problem of the treatment of diseases of women consisted in securing such a mode of life as would compel muscular activity, and so equalize the circulation. In a large class of cases of anæmia and amenorrhœa, where the patient complained of weakness, wanting to keep in the house and loll on the sofa, he had more confidence in this physiological mode of treatment than in all others. *If this were properly carried out, the local treatment now so much in vogue, and ever-ready resort to the speculum, might commonly be dispensed with.*"

From Dr. T. Gaillard Thomas's "Diseases of Women": "The fact is notorious that the local treatment of these diseases is not as successful in its results as we could wish. The treatment may extend over months, perhaps over years, before a cure is effected. Every one who has had experience in the

treatment of these disorders must have been struck with surprise at the wonderful improvement exerted, on cases *which have long resisted local means*, by a sea voyage, a visit to a watering-place, a course of sea-bathing, or a few months passed in the country."

Doctor : There is one more point which I hardly know how to name. It is the influence which vaginal examinations hold over the *innate womanhood*, especially when they are submitted to under the hands of a man physician. What I say is not fanciful. It is not self-seeking. There is bestowed upon woman a protective power, internal, occult, incomprehensible even to formulated thought, but a resident, guarding, guiding influence which forbids the entrance into its realm of aught but *itself*. It is sovereign there, and will be dethroned only by violence. Woman's experience tells her of this, even better than my words could had they the power of eloquence.

I hold this to be the choicest jewel in girlhood and womanhood. What is it? Tell me, what caused the torture of soul which you suffered, young girl, when your doctor proposed to institute a course of local uterine treatment. You said you would *die* rather than permit it. O deluded mother! to insist on this sacrifice of your daughter's finest, most interior sensibilities, so fine they perceived the shadow of *wrong*, and shrank in horror from it. Medical man, you are not to blame; you will never truly know, for you cannot, the change wrought in that young girl's womanhood by the administration of your local remedies. But your patient knows, and it is to the highest, the most sensitive, a sickening, revolting fact, that once this protective barrier between her and man broken down, once her sovereign dethroned, *always* broken, always an unoccupied throne. She will never again shrink from the advances of any man, as before, and repeated trials like this bring about a state of indifference, even to the extreme. I have listened to heart-rending stories told by girls and women whose experience confirmed this position.

During a course of lectures I was giving in Minneapolis, many years ago, a beautiful girl of my class seemed greatly affected when this subject came up. Next morning a carriage drove to the door, and she alighted, at once requesting to see

me. I met her, not knowing who it was, as she wore a close veil, and, throwing her arms about my neck, she exclaimed :

"Will it pain me, then, forever,
Will it leave me happy, never,
This weary, weary gnawing, and the old dull pain ?"

My endeavors to soothe her and learn the character of her visit were soon rewarded by a history the outlines of which it seems useful to give here, as it is a type of numbers all over the world. She was an heiress; her mother became anxious about her health ; family physician was called, and thought she would do well enough to take a trip, or observe some simple hygienic measures at home. But that would not gratify the mother ; she knew something was wrong, worse than the doctor thought; consumption was in the family, that very moment it might be stealthily gaining hold on her.

She was taken from school, menses suppressed, and the case was bad, indeed. She must have local treatment.

At this suggestion the daughter revolted. The scene became almost tragic; finally, she was given until the next day to pray over the matter. She agonized, prayed, tried to make herself yield to what was supposed her duty. She loved her mother, would give her life for hers, but *could* she obey in this instance? The hour appointed for the physician came, she told him, told her mother to let her die if that were the alternative. At last, believing she *ought to obey*, she allowed the first examination to be made.

"From that moment," said she, "I was no longer M—B. I was changed. I felt towards men less of that shrinking, retiring delicacy. After the second and third treatment I cared nothing at all for the shame of it. My doctor was our old physician, and very early desisted from the treatment, which was given in the first place only to gratify my mother, who probably would have employed another had he not complied. But I have *suffered* what no tongue can express. *I hate myself.* I have *lost*, I have *lost* something which I know will never be restored. Your lecture came home to me with such searching power, I want you to reach mothers and daughters; tell them about this dangerous evil.

"When my fortune comes into my own hands, I shall devote it to rescuing others from the fate assigned me through ignorance."

She called this a "dangerous evil," and very properly. Its effects are not obscure. The one who bears such an experience is ever more liable to be overcome by the wicked magnetic influence of some destroyer in masculine human shape. Woman, you alone are capable of meeting this foe with the sword of truth drawn from woman's experience. Will you enlighten your doctors? and will you decide against methods of medical treatment which bear such risks for you and yours? There will be no doubt of this when your reason and intelligence guide to reflection and inquiry as to the class of remedial measures you shall employ, for that which is the most simple, direct, and efficient will most naturally be preferred.

CHAPTER VIII.

MISCARRIAGE.

Doctor: This subject is a most important one, and points of such practical value are involved, that we may fitly spend a short time this morning in looking up its causes and coming to some understanding of its perils and treatment. Life is frequently sacrificed through ignorance in the management of this "accident of pregnancy." A knowledge of some facts will save almost every, if not every, case.

Viola: What is usually the cause of a fatal termination of miscarriage?

Doctor: Profuse hemorrhage, which takes place before, during, or after the expulsion of the ovum, as a miscarriage is merely the expulsion of the ovum before it reaches full term, usually any time during the first six months of gestation. The causes are as various as the conditions which bear upon human life, producing results in abnormal irritability of the nervous system, defective circulation and nutrition, local weakness, disease of the uterus, failure of adjacent parts to hold the pelvic contents in place, weakened cervix, or irritable fundus of the uterus, together with general debility, etc. Whatever brings the system under the influence of diseased action causes tendency to miscarriage, induces premature effort of the uterus, and exhibits its effects according as the influence is direct or indirect upon the uterus and its contents. For instance, increased flow of blood toward the uterus may be invited, when hemorrhage will ensue. Pain may be induced, nervous perturbation, as from some forceful mental emotion, and hence contraction of the uterus and expulsion of its contents. Detachment of the placenta, from whatever cause (it is marvelous, when we consider how slight the union between placenta and womb, that this does not oftener occur), will result in hemorrhage and miscarriage. Weak abdominal muscles, congestion

and crowding of the pelvic contents, pressure from tight clothing, etc., induce this malady; for there is no power to resist the effects of casual sudden motions, stooping, lifting, climbing, running, riding over jolting roads, etc., some, if not all, of which are liable to come in the experience of the mother, and she *should* be able to meet them unharmed.

Viola: I learn that, no matter what may be the cause of the miscarriage, expulsion of the ovum resembles that of the fetus in ordinary labor. The contractions of the uterus are the same. *Pain* and *hemorrhage* embrace the two leading symptoms.

Doctor: Yes, these two phenomena are always, to a greater or less extent, present in cases of threatened miscarriage; but simply because a pregnant woman has pain is not a certainty that it is the pain of miscarriage.

Contractions of the Uterus

are never continuous, but always intermittent. This holds true whether the expulsion of the fetus at full term, or of the ovum at an earlier period, is concerned. The *distinct interval* marks the pain of labor, and without this knowledge pain resulting from indigestion, colic, or numerous other causes may be mistaken for specific action of the uterus.

Viola: Is there ever sanguineous discharge from the vagina unaccompanied with threatened miscarriage?

Doctor: Yes. Some women seem to menstruate regularly during the earlier months of pregnancy. In such case, the hemorrhage will likely accord with the time of menstruation previous to pregnancy, and is unconnected with any cause of miscarriage, as the patient is in good health as usual, and the flow is not profuse or prolonged, lasting but a few days. To one who is suffering from an attack of uterine hemorrhage during pregnancy, I would say,

Be Calm, be Trustful, Fearless.

Dispose *at once* of all alarm. Dispassionately, intelligently allow the nervous system to play its normal part, and however urgent the demand for *speedy* control over the conditions, hold to what you know to be *true*, do what is reasonable, and the chances are in your favor.

Viola: But how is such a case to be properly managed? For instance, if a woman supposes herself threatened with miscarriage, and it is discovered that her fears are not without foundation, what is first to be done?

Doctor: Confine attention to one of two objects: prevention of the miscarriage, if possible; if this cannot be done, then to facilitate the expulsion of the ovum. As to prevention. This can very often be done, even when appearances are most discouraging. Place the patient in a recumbent position, and enjoin absolute rest. Know that what you now do is looking towards prevention of expulsion of the ovum, and so you would not induce muscular contraction. Cloths wrung from hot water, placed over the upper part of the abdomen, *no rubbing of abdomen*, feet warmed with hot bottles, plenty of bed covering, so as to admit of all the windows being opened, even in winter, the head on a level with the mattress, and if flooding is severe, tip up the bedstead by putting a brick or something else suitable under the foot-posts. If food is taken, it must be only a bit of dry toast and a little fruit; positively, this is a time for great abstemiousness. Remember, you are seeking to *prevent contraction of the uterus.* Any agent that tends to defeat this purpose is not admissible. Unused nutritive material will do this, by becoming a cause of irritation, hence the need of taking very little food; for only a small quantity can now be *used*, and the remainder would cause mischief. A hot, full injection to the bowels will be in place, as it is very quieting to the nerves. One such clearing of the bowels each other day is sufficient.

Very hot vaginal enemas, the patient being placed on a rubber bed-pan which is furnished with a tube for outlet of the water, are a marvelous agent for good in these cases. Where such pan is not to be procured, the ordinary one will do, but is less convenient. In all these measures uterine contraction is avoided.

But if there is good reason for believing the ovum is detached, if hemorrhage is persistent and indications look towards expulsion, the tampon, which is merely bits of old linen introduced into the vagina until it is filled, may be resorted to.

This is held in place by a T bandage, which any one knows how to construct and adjust.

Apply cold cloths to the abdomen, changing them frequently. Warmth to feet and hands. The tampon acts first to check the hemorrhage for the time being, and then the irritation it produces on the mouth of the uterus induces contraction and so facilitates the purpose in view.

Viola: In case a physician's services cannot be commanded, would it be safe for a nurse to claim the privilege of making an examination with reference to removal of the ovum?

Doctor: If the nurse can do so intelligently. Let her place the patient on the right side of the bed, very near the edge.

Standing at the right side, the nurse places her left hand over the abdomen, pushing gradually and firmly downward. With the feet of the patient drawn up close to the body, as she lies on her back, the nurse may introduce the index finger of her right hand so far up as to reach the mouth of the uterus, for it is held in place by the pressure made on the abdomen with the left hand. Gently insert the finger between the ovum and the wall of the cervical canal, and probably the whole protruding ovum may be commanded at once and removed. This puts a stop to further hemorrhage. But if it cannot be reached, use no forcible means.

Wait, and Trust Nature.

Put the patient in a diaper pack, and change this whenever it becomes heated and unpleasant.

Use vaginal injections twice or thrice daily. Allow but little food. Clear the bowels as often as necessary. Keep down inflammation in this way, keep quiet and calm, mentally and bodily, and there is safety. The offensive odor and long confinement in bed are about the only inconvenience to be apprehended. In such cases the ovum is discharged in fragments. Examinations at first unsuccessful may be repeated, and often it occurs that at last the offending presence is reached and removed, which gives great satisfaction.

Viola: Do not persons suffer repeated miscarriages, establishing a *habit* which is difficult to overcome?

Doctor: Yes. Like causes are followed by like effects. To sum up the whole matter in a nutshell, where there is general debility, nervous excitability, irritability, or in fact any deviation from the normal standard of health, and miscarriage has been once induced, there is no safety for coming pregnancies so long as these causes exist.

There is Certainty of Escape

only in bringing the whole departments of physical, mental, and spiritual being up to their highest possibilities of health and harmony.

Viola: Can any good be done in case the patient comes to you pregnant, with the "*habit*" already fastened upon her?

Doctor: These are not desirable cases, but to the praise of hygienic treatment be it said, I have never known a case of miscarriage to occur under its administration. The indications are so promptly and so naturally met, lack of tone and balance overcome.

Viola: I am surprised to find such a number of cases on your book. Here is one of a woman who had miscarried seven times, and never reached full term. She came under treatment for nervous prostration and dyspepsia; finding herself pregnant after about three months, she remained and was carried safely through, much to her delight. She even took mechanical massage up to within a few days of confinement. Gave birth to a fine, healthy child.

Doctor: I remember that case. She was a Quakeress. Oh, so delicate! Two children have since come to her home, and never another miscarriage. Looking over the case-book, you will find abundant evidence sustaining this position. For a woman to suffer repeated miscarriage is to die, not "by inches," but by yards.

Let her train for health, get tone to muscle, strength and calmness to nerve, purity of blood, integrity of function throughout the vital domain, and *then* there will be no more death in the house of life, no dying in the mother's womb, the first earthly home of immortal spirits, men and women.

CHAPTER IX.*

HYGIENIC APPLIANCES.

1. WET-SHEET PACK.— Spread two or three comfortables on a bed; over them a blanket; over that a cotton sheet; and now wring a sheet from cool, or warm, or hot water, and spread this over the whole. The patient, having removed the clothing, lies flat on the back, throws up the arms, and one-half the sheet is wrapped snugly around the body and lower limbs; placing the arms to the sides, the other half is now wrapped around the body and arms and lower limbs. Next comes the blanket and dry sheet, tucking closely first one side and then the other, next the comfortables. The head may now be raised on pillows; the feet, which seldom need be enveloped in the wet sheet, well wrapped, and a jug of hot water placed to them.

A cool cloth placed to the forehead, also one folded over the pillow and the head allowed to rest on it, if there is fever; this can be done very conveniently by placing a piece of rubber cloth, or oil silk, on the pillow to protect it from damp.

The time this process is to be continued must vary with circumstances. As a general rule, the patient must *warm up* well, even if it is necessary to place bottles of hot water or warm bricks to the sides, in order to obtain this result.

It is not well to reduce it to a sweating process; merely a comfortable temperature is all that need be desired. The pack may be followed by a general sponge or towel bath, or the patient may stand in a tub and a pail of warm or tepid water be thrown over the body, then wrapped in a dry sheet and well rubbed; or a warm spray may follow the pack.

2. HALF PACK.—This is the same as the full pack, except the sheet or cloth is allowed to extend only from the arm-pits to the hips, or nearly to the knee. I think this more useful

* This Chapter is reprinted from the author's work, entitled "How to be Well."

than the full pack — rather, it can be applied more judiciously under home treatment; and, in fact, in outside practice, I found my patients did not entertain such frightful notions about this, and it was seldom objected to.

3. Abdominal Bandage or Wet Girdle.—About three yards of soft, fine, but thick crash toweling makes a good one. Wring one-half of this from warm water, wrap it around the body and cover with the dry end; then have a flannel bandage, several folds, to pin snugly over this.

4. Compress.—This is a local application — may be used whenever there is pain, or heat, or soreness — and should gen erally be well covered with dry flannel.

The good effect is lessened, if not entirely lost, by neglect of this last precaution. I have been both amused and provoked at the strange thoughtlessness of people. Prescribe a compress, and behold! you find a small piece of wet rag, covered, if covered at all, with a thin strip of flannel, entirely insufficient to answer the end intended.

The hygienic processes get entirely too much censure because of the lack of *thoroughness* on the part of those who apply them.

5. Diaper Compress.—Take half a linen or fine cotton sheet, wring dry from cool or tepid water; fold diaper fashion, and apply the same; cover with dry flannel. This is extremely useful in all cases of uterine inflammation, or urethral congestion or inflammation, piles, etc.

6. Fomentation.— The most convenient means of applying hot fomentation is by using the rubber fomenting bag, or "hot-water bottle." Wring a small towel from hot water and apply over the part to be fomented; place the bag over this, having partly filled it with hot, but not boiling water, as this is injurious to the rubber.

This bag will remain warm a great length of time; there is no risk of having the clothing dampened, or other inconvenience which attends the usual way of fomenting thus. Dip the middle of a large piece of flannel in boiling water, twist the dry ends till the water is well expelled, apply to the surface and cover with dry sheet. When this cools, renew it so long as the process is to be persisted in. This answers the same purpose,

but is attended with some inconvenience. The rubber bottles are not expensive; are durable if you buy the best article, and can be had in any of our large cities, at the rubber stores. I keep them for sale to my patients and others, as I would like to see them brought into extended use.

7. SITZ-BATH.—Any ordinary tub will answer the purpose, though the tub made for that purpose is more convenient.

The water, cool, cold, warm, or hot, as the case may be, should be deep enough to come up over the abdomen and hips, usually, unless a shallow sitz is desired, when less water is used.

If a sitz and foot bath, the feet are placed in a vessel of hot water from three to five minutes, then a glass of cold water thrown over them, well rubbed and wrapped in flannel during the remainder of the time the sitz-bath is prolonged.

A blanket or warm wrap should always be thrown around the shoulders while taking this bath.

8. FOOT-BATH.—"Soaking the feet" is one of the measures decidedly not admissible in hygienic practice. A foot-bath should be *hot*—as hot as can be borne, and of from two to three or five minutes' duration only. Cool water dashed over the feet on taking them out of the bath, and well rubbed.

The *hot and cold* foot-bath is often serviceable in sprains of the foot or ankle, and other instances. The feet are placed in very hot water about two minutes, then dipped in cold water and again placed in hot, and so on.

9. SATURDAY BATH.—This is for well folks and sick people too. Have a basin of hot water, a pail of tepid or warm water, a piece of good soap, a small towel and a sheet. A common washing-tub also will answer, and the room should, *must* be warm. Now dip the small towel in the basin of hot water, rub on soap until the towel is well saturated with it. The clothing removed, wrap a sheet around you — if you take your own bath; expose one arm, rub it with the soapy towel, now the other, now the chest and abdomen, saw across the back; dip the towel again in hot water, rub on more soap, rub the thighs and legs and feet. Now step into the tub, and, with dipper in one hand, pour water over the arms and shoulders, and, in fact, *rinse* the whole body. Wrap in the dry sheet, and

rub thoroughly dry. This is one of the finest baths in domestic availability. It is given to invalids in this way, and would be thus called the

10. Soap and Towel Bath.—The patient in bed, have the wearing clothes removed; the water (hot), towel and basin, or two basins — one to wash, the other to rinse in. Take one arm, rub well with soapy towel, then with the bare hand manipulating and squeezing the arm gently; now rinse in clean, warm water and rub briskly dry; now take the other arm, and then the chest, back, thighs, etc., changing the water for clear, fresh water frequently. Then sponge the face and brush the hair, and the patient is gratefully in a state of tranquillity.

In very weak persons only a part may be given at one time, and, after a few hours, proceed to finish.

11. Spray Bath.—This is given after the hot-air or vapor bath; is simply a contrivance for rinsing the surface, and is very pleasant, as the water can be had at any temperature desired. I have it attached to my full baths — hot air, vapor, and electrical baths — as it is much liked by the majority of patients.

12. Vapor and Hot-air Baths.—These are agents of great remedial value, but I cannot recommend them as a means to be used in home treatment. It is a mistake that the sweating process is a purifying one to any degree exceeding less exhaustive measures. It is ascertained that the blood parts with its *water* in much larger proportion than its earthy or more solid matter during the forced action of the skin which causes sweating, be that cause what it may. Hence, the blood contains a larger proportion of impurities after sweating than before, as it lost more water than solid matter during the process. The skin is an eliminating organ, but it is a physiological fact that *no organ performs its natural function when forced.* So the small amount of material got rid of through profuse or prolonged sweating does not compensate for the weakness induced.

It would be a serious undertaking to write the various cases where these baths are applicable, and only the practiced eye of the physician should pretend to detect them.

13. Electrical Baths.—These, also, must be confined to infirmary or cure practice. They are available to much extent, and useful adjuncts to the general hygienic treatment.

There are various local baths, which must not occupy space in description here, as no one will fail to recognize their need in particular cases, and find means to supply them.

14. Injections.—These are so prominent in the treatment of acute diseases that they should be ranked first in order. What curious notions prevail concerning this most efficacious remedial means! People will endure to have their bowels raked and scoured with cathartic poisons, but to speak of using the *syringe* is to proclaim their death sentence. After they are convinced so far as to allow its use, you are cautioned against using too much water, lest the bowels burst. I have met with many most ludicrous experiences in my missionary work of introducing to patients the use of this valuable method.

How readily we can see its reasonableness, when we use the knowledge we have of physiology, and recall the fact that the mucous lining of the intestines is like that of the external skin — that, as explained elsewhere in this little book, the bowels are *excretory* organs, because the materials found there are such as have been *secreted* from the blood, being no longer of use not only, but disease-producing agents, liable to re-absorption into the blood, thus bringing disorder. In diseased states the secretions are liable to be, in fact *are*, vicious and irritating. How easily this can be met by the use of a full injection of warm or hot water, relaxing the membranes and washing out the bowels — a sort of internal bath.

By full injection, I mean as much as can be received — from two to four quarts, or more. The patient will at first declare, after receiving a small portion, that no more can possibly be given, but that is not so. Gently manipulate the abdomen, following the line of the colon, while the water is being introduced. At times, wait a few seconds, as gases in the intestines will induce pain ; work carefully and rather slowly, and a good amount will be received. Place a closely-folded towel to the anus, pressing tightly, so the injection may be retained ; and, as a rule, it should not be allowed to pass off until there is an aching or griping of the whole abdomen,— not merely a bearing down or urging at the rectum.

Small Injections.—A gill or two of cool water, taken to be retained, is very useful in many cases — piles, uterine conges-

tion, inflammation of the bladder, etc., also in dysentery. I often use white castile soapsuds, or a little glycerine, sweet oil, or bran-tea in the water.

Vaginal Injections.—These are to be used with much caution. Unless especially prescribed, I do not recommend them. I have seen much injury done by their use.

As a means of cleanliness only can they be safe in the hands of non-professional people.

As, in description of acute diseases and treatment, injections are recommended in particular cases, I need give no further directions for their use in this chapter.

Perhaps, however, it is well to say that *chronic invalids* should *not* become dependent on this as a means of moving what the heavens and the earth cannot induce to activity — namely, "obstinate bowels." If these people will cultivate nerve-force and expend less, they will not require artificial means of any kind; but if such aid must be had, I prefer the cool, small injection to be taken at night and retained. Then, if necessary, at a certain time next morning, take enough cool water to move the bowels, and, after evacuation, a small cool or cold one — again to be retained.

But, in acute cases, rely on the injections — full and plenteous.

CHAPTER X.

FEVER.

Doctor: Julia, what is fever?

Julia: Fever is a great commotion and fire in the system, and ought to be broken up as soon as possible; the strongest kinds of medicines are required for that purpose. We are always alarmed when a fever is real, burning hot. I would much prefer less heat on the surface.

Doctor: When all the bodily functions are disturbed more or less, and that disturbance manifested in periodical paroxysms, severe or mild, of *cold*, *hot*, and *sweating* stages, there is

A Fever.

This abnormal disturbance is rather general and simultaneous, and commences with lassitude, indisposition to exertion, uncomfortable sensations all over the body, creeping chills, shivering, succeeded by hot flushes, thirst, backache, aching of bones, and throughout the entire body. Then comes unnatural heat, and redness and fullness of blood-vessels; the whole system is sick; headache, coated tongue, rapid pulse, insufficient secretions, great prostration, etc. The superficial heat and redness partially or entirely subside as the sweating stage approaches, and sweating may be either local or general.

Viola: There are, then, three sets of paroxysm, three stages — the cold, hot, and sweating stage. Is each stage of the paroxysm equally severe?

Doctor: Not generally. Any one may be greatly more severe than the others, or so slight as scarcely to be noticed. The high, burning fever, which so frightens Julia and her friends, and prompts them to warlike action towards its supression, is the one least to be dreaded. In proportion as remedial action is thrown to the surface there is safety. There is a general, universal law of the animal economy — what is it?

Viola: It is that of

Alternate Action and Repose.

Acting under this law in a case of fever, the organism may be said to gather its forces to the center, which is the cold stage, preparatory to making the remedial effort or expulsive endeavor; this done, the vital instincts direct their hosts to the surface with an energy which means to open up the purifying channels now obstructed; this is the hot stage, a reaction from the cold. But even the bravest fight is not exempt from weariness, and the time comes when rest must be had. The surface becomes less burning, the heart more quiet, and the sweating stage is announced, concluding the paroxysm for that occasion.

Julia: Will the paroxysm return?

Viola: Of course, again and again, until victory is achieved—"victory or death." It is all owing to how much there is to be done in setting things aright.

Doctor: You would bring reason and intelligence to aid the vital instincts when they are engaged in struggling against harmful agents, which may have invaded the vital domain.

Intermittent Fever.

What are the symptoms?

Viola: On the approach of this disease there is experienced a sensation of weakness and distress about the stomach; a disposition to yawn and stretch; a feeling of chilliness, particularly along the spine; the face grows pale and shrunken, the skin dry and rough. This sense of chilliness soon becomes more decided and more general; and trembling and shivering all over take place; the teeth chatter; the knees knock together; cheeks, lips, and nails turn blue; the breathing is quick and anxious; pulse frequent, but feeble; pains are felt in the back, head, and loins; secretions are diminished; the bowels constipated; the tongue dry and white.

These general symptoms are succeeded by alternate flashes of heat, and by degrees the coldness ceases, only to be followed by the *second stage*, when the face becomes red and turgid; the whole surface of the body hot and dry. The head aches,

temples throb, the pulse becomes full and strong, as well as rapid, and a general feeling of uncomfortableness and restlessness takes place. Then comes the third stage. Moisture of the skin appears on the forehead and face, and soon a general sweat breaks forth, bringing relief. The tongue becomes moist, secretions released, the pains depart, and after a while the sweating leaves, and "all is well." This is the general phase of ague. There are varieties almost innumerable; the paroxysm may not present all the stages. The heat and sweating will be present without the chilliness; or the chilliness without heat following; or the sweating stage alone may be present. The paroxysm is sometimes postponed in its periodical attack; it is then getting milder, and when the time is anticipated, it is increasing in severity. I must also mention that convulsions and vomiting are frequent attendants on this disease. Doubtless these deviations depend upon the constitution of the patient, and also upon the local circumstances. I have seen cases where the wildest delirium attended the hot stage; also fainting fits, and even strong tetanic symptoms presented themselves. The duration of these paroxysms is as long as the existence of causes.

Treatment.

In this, as in the description of the disease, there can be no directions which will not admit of variation. I give a form of treatment which in my own practice has been remarkably successful, and which will be found safe and expedient, I feel sure, to those who are disposed to be *cured* — not blinded by the *appearance* of cure while causes are allowed to remain.

When the cold stage is in its incipiency — when the chilliness and aching and depression of the forces of the system portend what is to follow, very copious drinking of *hot water* should at once be resorted to; the feet placed in a hot bath for five minutes, afterward well rubbed dry. Let the patient then be placed in bed, and hot fomentations applied to the liver and stomach and spleen, in fact, to the whole visceral region. If the rubber fomenting-bag is used, wring a cotton or linen cloth from hot water, and, placing it on the surface to be fomented,

apply the bag over this, covering all with the dry flannel. This fomentation may be continued one hour, or even during the continuance of the cold stages.

Have the feet kept warm by placing a jug of hot water to them, and cover well with abundance of light warm blankets and comfortables. Drink a glass of hot water, or lemon water, every twenty minutes during this stage. As the chilliness abates and the second stage asserts itself, a very full enema should be given. Use warm water, as warm as can be borne, and let the patient receive from one to three or four quarts of water.

While the enema is being administered, gently rub and knead the abdomen at intervals of a few moments, alternating with the pumping of the syringe, if a bulb syringe is used; but if a fountain syringe is used, a gentle stroking and rubbing and kneading of the abdomen may be continued during the time the water is received into the bowels. After this, apply a closely-folded napkin or towel to the anus, press upward firmly with the left hand, and at the same time with the right hand rub and press the liver gently, but firmly, for a moment or so. This enables the patient to retain the water injected, and gives most positive results—such as are desired in the case.

After the enema passes off (let it be retained ten, fifteen, or twenty minutes, if possible), apply a bandage of sufficient width to reach from the arm-pits to the hips, and long enough to double around the body. Wring this from warm or tepid water; cover well with dry flannel. If there is thirst, cool drinks may be given—*never ice-cold.*

Apply a cloth wet in cool water to the head, or, which I think is preferable, frequent spongings of the face and light wetting of the head, applying a cool cloth under that part which rests on the pillow. This can be done very nicely by using a piece of oil silk over the pillow. The compress or bandage may be changed as it becomes heated; rewrung from tepid water and re-applied. The air of the room will be pure, *of course*, and the patient allowed to *rest.*

When the third stage approaches, and it gives its signal by the sweat upon the brow and forehead, administer a hot soap and water sponge-bath.

Now let the patient *rest*, and, if possible, sleep.

If sweating is so profuse as to bring great inconvenience, light spongings of the spine in tepid water, or even to sponge the whole surface is admissible. But *rest* is better, if it can be had. There will, in some cases, unusual symptoms present themselves. These need give no alarm—need not lead to distrust of the correctness of the *grand* principles which underlie hygienic treatment. Always keeping before the mind that these morbid manifestations are but the callings of organic instinct for help—appealing to reason and to *science*, to read what nature indicates, and then to apply *helpful* means. For instance, if vomiting occurs, give copious draughts of warm water—producing emesis—or, *hot* water taken in sips alternating with cold; and, if convulsive symptoms arise, a hot sitz and foot bath of five to ten minutes, with copious drinking of hot water, or the full hot bath may be given. This, in treating children, is perhaps most convenient.

I regard the treatment which *anticipates* the paroxysm of the first importance. We have a congested liver and spleen, and probably stomach. On the "well day," foment the liver and spleen forty minutes. Have the fomented surface well rubbed for ten minutes, dipping the hand in cold water every few moments and rubbing briskly from side to side. Now rub with a dry towel, and the patient lying upon the face, sponge the spine with cloths wrung from very hot water, for five minutes. Follow this with cool sponging a moment, and brisk, dry towel rubbing. After this, a rest of one hour or longer.

About 9 o'clock A. M. is perhaps the best time for taking morning treatment. A 3 o'clock P. M. repeat the fomentation thirty minutes, and follow this with a *full* enema of hot water, injecting at the last a gill of quite cool water. Let this be retained, while the liver and abdomen are thoroughly rubbed and kneaded.

Should a copious discharge of bile follow, repeat the injection; using tepid water, and as much in quantity as can be received. *Complete rest* of an hour afterward.

Typhus Fever.

Viola: How strangely at variance the different medical authors are in their arrangement of fevers. There seems to be no one opinion holding preference among physicians, so I suppose it is not a matter of very great importance.

Doctor: The indications for treatment are about the same under any arrangement, and after all there are some marked characteristics which pretty surely define the disease. There are two general classes of fever :

Continued and Periodic.

Please mention a type of each.

Viola : *Typhus fever* would be typical of continued fever ; *intermittent* fever or *ague* would be a type of periodical fever. Are typhus and typhoid fevers the same ?

Doctor: In their main characteristics they are; but there are some leading discriminations.

Viola : The premonitory symptoms of typhus are languor, paleness, headache, loss of appetite, tremor, muscular debility, irregularity of the bowels, dryness of the skin, tongue furred, wandering pains in various parts of the body, unrefreshing sleep, a general sense of weariness, and incapacity for thought or muscular action.

The surface is generally hot, but there is frequently coldness and even moisture. The tongue is very dry or clammy ; it is sometimes clean and smooth, at other times furred ; the edges and tip will be red, and a white streak which covers the central portion of the tongue, or this streak will be divided by a straight brown line which runs down the center of the tongue. Sordes accumulate over the teeth, the eyes are suffused, there is delirum or stupor. Small black spots float before the eyes, and the patient is constantly grasping the air after them, or picking them off the bed-clothes. There is distention of the abdomen at times, though but little complaint of pain; the fæces and urine pass involuntarily, and the patient is indifferent to his surroundings. There is frequently cough and expectoration, and the breathing is "rattling" or sonorous.

Typhoid Fever.

The commencement of typhoid fever is often insidious. Premonitory symptoms are present for days and weeks. The appearance of the countenance is less dull than in typhus, and is more anxious. The delirium is wilder. The patient is disposed to get out of bed. The intestines are particularly affected, so much so that Dr. Budd calls it intestinal fever, and Dr. Watson says he wishes it had been named that instead of typhoid.

Diarrhœa is often an early symptom, preceded by pain. There is tenderness over the cæcal region, and, if diarrhœa continue, even if there be no pain complained of, there is an almost certainty of ulceration of the bowels.

There are what the books call "complications" of these fevers—inflammation of the brain, of the lungs, bowels, etc.; hemorrhages of the bowels, stomach, bladder, etc.

But these can be very readily met with proper hygienic appliances, and cases which *appear* hopeless should not be given up as such, so long as breath lasts or any sign of life is present.

Treatment.

Doctor: The general indications are to procure elimination and balance of circulation with the least expenditure of vital power; also to watch carefully the complications which are liable to arise, and meet them with promptness.

During the first stage, or the incipiency, I would administer a hot sitz and foot bath for ten minutes. Let the patient be seated in a tub, with feet placed in a vessel of hot water—the temperature to be as high as can be borne; a blanket wrapped around the shoulders and allowed to fall closely about the outside of the tub. The head may be covered with a towel wrung from cold water; the face sponged in cool water. Sips of hot water or hot lemon water should be taken while in the bath. Add more hot water as it begins to cool. Let the feet and lower limbs be rubbed, dipping the hand in the hot water. Rub also the stomach and liver. Now, having the room warm, let the patient lean forward, the blanket removed and placed across

the knees, and the back thoroughly rubbed with towels dipped in the hot water of the bath. Strong soap should also be used, or a spoonful of sal-soda put in the water. In a few moments let the chest and abdomen and thighs be rubbed. Then wrap a warm dry sheet about the shoulders and body, and, placing the patient on a bed or lounge, rub thoroughly dry. Putting on the night-clothing, sponge the face in cool water, apply a jug of hot water to the feet, and give alternate sips of hot and cold water to drink as thirst demands. After resting half an hour (unless the patient falls asleep), apply the fomenter to the abdomen twenty minutes.

On removing this, administer a full injection of very warm water. Gently manipulate the abdomen and liver, and after a few moments the water may be allowed to pass off. Follow this with another copious enema, at a slightly reduced temperature. This should be retained as long as possible. Now let the patient *rest*. The room should be warm, well ventilated, light, but not glaringly so.

There should be no talking or whispering permitted in hearing of the patient. After the second enema passes off, and a short rest has followed, if there be aching down the spine, give a fomentation to the lower half of the spine — apply hot cloths, or the bag — about twenty minutes, and follow this with the abdominal bandage wrung from warm water and applied to the abdomen only — *not* across the back. The dry covering may be allowed to extend entirely around the body.

Keep the feet warm. Frequently bathe the temples and hands, and give sips of water, *hot* and cold. If the surface of the whole body is hot, the wide abdominal bandage may be kept on constantly, or several hours at a time. Always give attention to the feet, bathing them in hot water two or three moments at a time, and after rubbing dry, place hot bottles to them. *Never disturb* the patient, if asleep, when the time for any form of treatment arrives.

During the first three or five days, if symptoms do not yield somewhat after the first treatment, follow it by repetition of the same each afternoon at about four o'clock.

If there is local pain, fomentations will always prove helpful. The spine should be sponged in hot water for five

minutes once an hour during the day. If general heat on the surface, the whole body and limbs may be sponged about once in two hours; at which time renew the abdominal bandage.

The patient may remain in bed to receive this treatment. The attendant's hand passing under the bed-clothes, and bathing and rubbing but a portion of the surface at a time, gives no exposure or liability to unpleasant sensations of cold.

If the patient is not able to resume a sitting posture, the full long bath may be given, if convenient, at a temperature not lower than 95°. Five minutes should be about the duration. The treatment following this may be the same as before.

But I have derived quite as good results from using the half pack, applying it from the arm-pits almost to the knees, and leaving the arms free. This should be wrung from hot water. It is always safe and gives no shock. If this is used, it may be prolonged to one hour. On removing it, the body should be washed with tepid or warm water in which a little sal-soda is dissolved, and a rest of an hour had before applying the bandage or giving further treatment. There is such a variety of constitutions, disease appears under such a multitude of forms, that it is not possible to give exact directions for exactly each case, nor is it essential. Keeping before the mind the fact that conditions are to be supplied helpful to nature's efforts, the minutiæ of treatment will easily follow. The full injection may be given of hot water, after each treatment, afternoons. Follow this with a cooler one, which should be retained some time, ten minutes to half an hour.

At ten o'clock each morning foment the abdomen and liver thirty minutes, after which administer a warm injection and apply the bandage. If rest comes to the patient, it will be looked for after midnight, and during the early morning hours. This should be invited by every possible means.

There must not be allowed the burning of lights in the room. Quiet and *rest.* These are *absolutely* essential.

A thorough rubbing of the whole surface with dry flannel may take the place of the sponge-bath, previous to the treatment at 10 o'clock A. M. As the fever symptoms abate, the patient grows weaker; omit the general treatment; give a daily rubbing or two; let the bandage be worn, if it do not produce

chilliness, for about five hours, from 10 A. M. to 3 P. M. On removing it, rub well the surface, and sponge the spine in hot water. At night, one full enema may be given of warm water, and a spoonful of pure sweet oil.

A sponge-bath now, once in two days. But if complications arise, meet them as for these inflammations.

Fomentations to the lungs will relieve those lung symptoms, and the enemas will affect the bowels; give them after each passage, if diarrhœa occur. Cold cloths to the abdomen, and cool injections for hemorrhage, etc. Manipulate the lower limbs, press and gently stroke them, also the arms, daily or frequently. Do not tire the patient; favor all desire on his part for *rest.* As to food during fever, give fruit juices if desired, diluted with water, toast water, and "nothing more."

As fever abates and convalescence begins, bran-tea, or bran-gruel more properly, is, I believe, *the* food. This may be taken at regular intervals at first, about four times each day. Quantity as well as quality must be considered. This depends on the age, etc., of the patient, and I leave the attendants to exercise their *good* judgment regarding it. Baked apples or fruits of the season may be indulged in if there be no reason to counter-indicate their use. If animal food is craved, let it be given sparingly, not more than once a day; and an adult should take it in the form of steak, broiled rare, and well masticated, *rejecting the pulp*, swallowing only the juices.

This is far preferable to beef-tea. Unleavened bread is better than yeast bread. When the patient's appetite is *inexorable*, let a drink of hot water be given; this distends the stomach and gives the feeling of satisfaction akin to that which would come from eating. Children can be induced to take simple food, and during convalescence should be allowed only such.

Indulgence of appetite at these times is had at the cost of life, or, what is as bad, of future good health; for chronic diseases are always liable to become fastened upon the system, which is not permitted to finish well its depurating work, which is burdened with food when not able to dispose of it.

I would say, regarding my directions for treatment of fever, that much must necessarily be left to the wise decision of the patient and attendants.

It is understood that continued fever differs from periodic fever, in that the febrile symptoms do not entirely subside at any time ; there is a succession of exacerbations, and no appreciable intermission in periodic fever.

The cold stage will come perhaps irregularly—at one time in the night, again some time during the day, or several times. Of course, warmth will then be applied, and await the reaction, or warm stage, before putting on the bandage or applying the half pack. In home treatment these things can be very soon learned if attention be paid to them.

I have recommended pretty vigorous measures, and such are useful, as I know from long experience, in the treatment of acute diseases ; but it is not *always* necessary to prolong the whole "prescription" during even as long a period as three or five days ; symptoms will soon indicate what to do as to that.

This is a good and safe rule to follow when doubt arises. Be sure not to do too much.

Remittent Fever.

Viola : This is a *periodic fever*. It has one daily exacerbation of the paroxysm, but unlike intermittent fever, the stages are not so defined as to become complete. They blend more into each other. Often, there is much bilious vomiting, and then it is called bilious remittent fever. The symptoms at first are hardly distinguishable from typhus fever, but being *periodic* and not *continued*, the *intermission of symptoms* soon decides the matter in accordance with this distinguishing feature. What is the

Treatment ?

Doctor: The first thing to be done is to free the bowels. A full enema of hot water—as high temperature as can be borne—should be given ; this to be retained, if possible, a few moments. If it *will* pass off, repeat the enema ; gently manipulating the abdomen and pressing the liver. Free drinking of hot water, if there be no bilious vomiting ; and if there be inclination to "throw up bile," favor it by free drinking of warm water to the effect of producing emesis.

If the discharges responding to enemas show much bile, repeat the full injection. In case of children, when they cannot be induced to drink warm water, place a small cloth wrung from very cold water right to the pit of the stomach; at the same time apply the fomenting-bag or cloth over this and the liver and abdomen. This will remedy the feeling of nausea, and by re-applying the same for half an hour or so, the patient can easily take the enema. A hot foot-bath of three minutes, and after this the abdominal bandage wrung from warm water, to be worn an hour or more, or until the fever is in the ascendant. While the bandage is worn, if there is still chilliness, bottles of hot water may be placed to the back, the fomenting-bag over the the liver, and the feet kept warm.

The fever may be met with a thorough towel-bath, using soap and sal-soda in the water. Then apply the cool bandage after sufficient interval of rest. This may be worn continually, or until the next chill approaches, when remove it and apply the fomenter to liver and abdomen for one hour.

A full enema should now be given, and, after it passes off, allow the patient to rest. If thirst or nausea are present, sips of hot water alternate with cold.

Food should be mostly withheld; only toast-water or very thin rice or wheat-meal gruel are admissible in answer to the patient's craving. Never seek to "*tempt the appetite.*"

The convalescence may be managed similar to that of other fevers.

CHAPTER XI.

ERUPTIVE FEVERS.

Viola: Did you ever treat a case of

SMALL-POX?

Doctor: I never did. Dr. Glass has treated a large number of cases, and *never lost one, under hygienic treatment.*

This disease sets in with strong symptoms: chills, feverishness, hard and frequent pulse, nausea, vomiting, pain in the stomach, severe headache and backache.

It is difficult to distinguish this from others of the eruptive fevers at the onset, but if vomiting and *unbearable pain in the back* be present, then disease may be suspicioned. Several days (about three, perhaps), will elapse before the eruption begins to show itself—"first on the face, then on the neck and wrists, and on the trunk of the body, and lastly on the lower extremities." Of course, there are deviations from this. The pimples grow into pustules about the eighth day, when they begin to break and scabs form.

The number of pustules is by no means uniform—sometimes few, sometimes several hundred. The *confluent form* of small-pox is when there is a plentiful eruption, and the pustules run together; the *discreet form*, when they are few and stand out distinctly. The former is always dangerous, while the latter is not so. The fever subsides when the eruption is well out; the headache and pain in the back also leave. About the seventh or eighth day, however, there is feverishness, and at this period there is great danger. It is now that cases are most likely to prove fatal. This "perilous day" is justly looked forward to with much anxiety. The *second week* is a critical one.

There are other conditions frequently attending the disease; sore throat is one. But it is not necessary to prolong this sketch further than to speak of the disagreeable odor which proceeds from the body during the period of maturation of the pustules, and the suffering occasioned by the itching of the surface, tempting the patient to tear off the heads of the pustules, and thus, *perhaps*, insure pitting. I say *perhaps*. "I had," says Dr. Glass, "cases of confluent small-pox, very severe, indeed, and the patient could not be, or at least was not, prevented from rubbing the scabs from portions of the body; the face was protected carefully. On recovering, it was found that the face was pitted and the body unmarked."

There must ever be great diversity of opinion regarding this matter, for it seems to me almost every case presents individual conditions, favorable or not to the formation of pits, and the friends and medical attendants will suffer humiliation if they are so rash as to say this method or that will insure protection from this dreaded result. Still, something may be done, and it is worth the effort at least.

Treatment.

The first measure is to clear the bowels by enema of hot *soapsuds*. White castile soap is preferable to any other. Make a good, stiff suds, and inject as much as the patient can receive. After manipulating the abdomen and liver, give a drink of hot water; let the enema be retained as long as possible; when this passes off, repeat, using only clear hot water. Manipulate the abdomen while this is given.

Now have ready a tub in which is a pail or so of hot water. Dip a towel in this, rub soap on it; get the towel well soaked with the soap and water. Rub the whole surface, first the arms, then the back, chest, and lower limbs, with this soaped towel; place the patient in the tub; the feet may be put on a foot-bath tub or pail; rinse and wash well the back and body; add more hot water, rub the limbs and feet, rinse well; then wrap a dry, warm sheet around the shoulders and body, and place in bed. Do not rub dry; cover with light, warm bed-clothing, place a jug of hot water to the feet, and give copious draughts

of *hot* water—occasionally sips of cold. Have the room comfortably warm, well ventilated, *quiet.* Cold cloths, or cool spongings, may be applied to the head, when desired; allow no food.

If vomiting continue, an adult will drink so freely of *warm* water as to produce emesis; a child may have the enema repeated in the course of about three hours.

This hot soap bath may be repeated next day at about nine o'clock, or earlier if symptoms are importunate. Always, on taking the patient from the bath, envelope him in the warm dry sheet, and let him so remain in bed for an hour or so. Give a full injection daily.

As the pimples appear and pain subsides, the patient may remain in bed; a towel bath of soap and hot water may be given, having the room warm, and avoiding exposure.

Extreme cleanliness must be observed. There will now come much variableness of sensation as to cold and heat. This must be carefully watched, and the temperature of the room and amount of covers graduated accordingly; also measures taken to warm the extremities, hot drinks given, etc.

I give no food. This bran-tea may be drank if there is no nausea, or when it ceases. Let it be given about three times a day at regular intervals, but about the eighth day this should be discontinued for one or two days, and toast water substituted; but nothing more than this.

To allay itching, and *perhaps* prevent pitting, I would recommend an application like this: Finely-powdered camphor and pure olive oil of equal parts by measure. This may be smeared over the face; then dust more camphor over the face. A soft linen cloth now applied, and over this a cloth wrung from cool water, will be found grateful. I am of opinion that if each pustule was punctured it would lessen the danger of pitting.

Chicken-pox.

Doctor: This is a simple disorder peculiar to children, and as there is little or no constitutional disturbance, we are at a loss for symptoms. There is an eruption composed of small transparent vesicles, and a slight degree of redness around them; but very little fever accompanies these. It begins on

the neck, shoulders, and breast, and almost always affects the scalp, while the face is quite free from the eruption. Sometimes this lasts several days, and the little vesicles become not so transparent, and when irritated by scratching or rubbing, become inflamed and even converted into pustules. They dry quickly and become scaly, and crumble off gradually, not being detached in one mass.

The treatment is correspondingly mild. Daily washing of the whole surface in warm water, using castile soap ; a simple diet of bread and fruit ; the bowels kept open by warm enema daily, is about all the treatment required.

Measles.

Viola: I learn that this, like all fevers, begins with chilliness, followed by fever and thirst. But the peculiarity of the fever attending measles is the inflammatory condition of the mucous membranes of the air passages. There is much sneezing, the eyes become watery, copious discharges from the nose like catarrh, soreness of the throat, sometimes a dry cough. Diarrhœa is often an accompaniment, also vomiting. They cease on the appearance of the eruption, which takes place about the fourth day from the commencement of catarrhal symptoms — sometimes later — even to the eighth or tenth day. The eruption is a rash of minute pimples at first, but form into blotches, leaving the portions of the skin between them of the natural color. It is two or three days coming out, beginning on the neck, face, and arms, then reaching the trunk of the body and lower extremities.

Doctor: It remains on the face about three days, then begins to decline in the order of its appearance. Measles is contagious, and sets in about ten days or a fortnight from the time of exposure. It is difficult at first to distinguish this from small-pox, and, still more so, this from scarlet fever. But as the indications for treatment are not unlike in this whole family of eruptive fevers, it is not a matter of *very* much importance what you name the disease at first. Distinguishing characteristics soon present themselves. While the rash characterizes measles, I have always found the pectoral symp-

toms far the more important. I have met with many cases of confirmed pulmonary disease, which attributed its origin to measles.

I do not understand why the mistaken notion is so prevalent, that measles is only measles—a trivial complaint—and very little care will suffice to meet its phases. In reality, it is as dangerous as any of the eruptive fevers.

Treatment.

Doctor: At commencement of catarrhal symptoms a full soapsuds hot bath should be taken; have the whole body well rubbed; the feet also placed in hot water about three minutes. Free the bowels by enema of warm water very full; give drink of hot water, or simple hot lemonade. The food should be gruel or bran-tea, and a moderate allowance of fruit.

Keep the patient warm—not more so than is comfortable, and watch chest symptoms. If the cough continue hard and rough, breathing rapid, apply hot fomentation to the chest half an hour at a time, and follow this with application of several folds of dry flannel. In about one hour repeat the fomentation, and so on, till symptoms subside somewhat. If there is diarrhœa, apply fomentation to the abdomen and liver forty minutes; remove this, rub dry, then give full enema of very warm, thin bran-tea, adding one spoonful of pure sweet oil. This may be repeated after each operation if they are frequent.

When the eruption appears, give cool or warm drinks, as thirst calls for. Keep quietly in bed. Sponge the surface or portions at a time in hot water. Let the air be pure. Allow very little food. Should spasm occur, as it sometimes does, place the patient in a full hot bath for five minutes. Wrap then in a dry sheet. Give full enema.

There are some constitutions, or, rather, perhaps, some fevers, that bear cold bathing and cold applications to the chest very well. This is when the fever approaches to synochus, or common fever. There is no appearance of prostration. As the hot bath and mild measures are *always* entirely safe, I speak particularly of them.

During convalescence much care must be taken that the patient is in no way exposed to cold or to other dangers which beset the convalescent period of all diseases.

Scarlet Fever.

Doctor: How many varieties of scarlet fever do authors generally agree to make, that the description of this disease may be more conveniently arranged?

Viola : Three varieties: scarlatina *simplex*, in which there is a florid rash and little or no affection of the throat; scarlatina *anginosa*, in which both the skin and the throat are decidedly implicated; and scarlatina *maligna*, in which the stress of the disease falls upon the throat.

Doctor: Remember that the name *scarlatina* is only the scientific one for scarlet fever. I have found it troublesome to impress persons with the fact; they persisting in the error that scarlet fever is more alarming than scarlatina. Is this a continued fever ?

Viola : It is, and begins, like all other continued fevers, with lassitude, shivering, weakness, headache, and perhaps nausea and vomiting. About the second day the eruption begins to come out. It is characterized by a redness which begins in minute points, but spreads rapidly and closely over the surface, giving the skin a general red color. In favorable cases the eruption " stands out for three or four days, and then begins to fade and decline, becoming by degrees indistinct and disappearing altogether, in the majority of instances, before the end of the seventh day. About this time desquamation of the cuticle begins to take place—in smaller scarf or scales from the face and body, in large flakes frequently from the extremities. The scarf skin of the hands and of the feet sometimes separate almost entirely. A glove or slipper of cuticle comes away at once."

Julia : In

Scarlatina Maligna

the rash comes out late, or perhaps not at all, and is apt suddenly to disappear and appear again.

Simplex and Anginosa

are forms where the tongue is covered with a white, thick, cream-like fur, through which are seen projecting the red and

exaggerated papillæ ; the edges of the tongue being likewise of a bright red color. At length the whole surface of the tongue becomes preternaturally red and clean and raw-looking. This is called the

STRAWBERRY TONGUE.

The throat is sore, tonsils swollen and red, or covered with a whitish or gray substance. The throat is perilously affected. As the disease goes on, there are acrid discharges from the throat and nostrils, and even the anus becomes excoriated, as a consequence of the virulent discharges from the bowels. Inflammation of the eustachian tube is a very common attendant upon the throat affection, and the patient may become incurably deaf from destruction of some of the membranes and little bones of the ear. Very unpleasant results follow a severe course of scarlet fever. It seems that any latent tendency to scrofula in any form is now ready to be developed ; enlargement of the glands under the ears, sores in various places over the body, swelling of the joints, dropsy, etc.

TREATMENT.

Doctor: Hot foot-bath five minutes. Cool the head. Place the patient in bed, and apply the fomenting-bag to the abdomen and liver and stomach fifteen minutes. Now give freely hot lemonade—not sweet, but as acid as the patient will consent to drink. Distend the stomach with this.

Follow with full injection of hot water, to which is added a teaspoonful of spirits of ammonia. After this passes off, place the patient in bed and apply hot fomentation to the throat twenty minutes, giving frequent sips of hot water during this time, and having a jug of hot water to the feet. Then apply a cool compress (not cold), and cover well with *abundance* of dry flannel. This may remain half an hour, when the fomentation should be repeated. If the cool application is not agreeable to the patient, apply *dry* flannel to the throat when the hot fomentation is discontinued ; and when this is done, dip the hand in cold water and rub well the throat for five minutes, frequently wetting the hand, and finally rub with a dry towel.

The fomentations may be thus applied and continued until there is some yielding of the local symptoms. Be sure to have the applications made with a *positiveness* which such cases demand. If there is nausea and vomiting and great prostration of the system, take a piece of flannel, large enough to go around the body, and wring from strong and *hot* mustard water —about three tablespoonfuls of ground mustard to one quart of hot water. Wrap this around the body from the arm-pits to the hips, and cover with several thicknesses of dry flannel, pinning closely enough to be comfortable. Then place the feet in the hot mustard bath for two minutes, and rub dry. The throat will at this time be protected by the dry flannel or cool compress. Keep the patient in this mustard pack half an hour if possible, or longer if he is soothed and restful. When the surface becomes pretty red and the flannel is removed, apply a soft linen or fine cotton bandage wrung from warm water, and cover well with dry flannel. This may be worn pretty constantly, unless chilliness or great unwillingness on the part of the patient seem to contra-indicate its use. If there is persistent nausea or diarrhœa, give full enemas three times a day, using warm, thin bran-tea with a spoonful of olive oil, also hot water and ammonia as above, also clear hot water.

Insist upon the patient taking frequent sips of hot water or hot lemonade. Frequent gargling of the throat with hot water, then cold, is an excellent measure, but children can scarcely ever be persuaded to do this, and external applications, together with swallowing hot water, answer about as well.

Sponge the face in cool water frequently, also the hands. The arms and lower limbs may be sponged in warm water once or twice a day, as it is soothing to the patient.

The patient's clothing and bed-clothing, and all the cloths used about him, *must* be changed daily; the bandages and towels and flannels *scalded* and well washed before using again. Give no ice-cold water as drink; give cool water or cool bran-tea, slippery-elm, flax-seed, or barley water.

Give no food but this during the days of fever, or while the throat is seriously affected; then a little fruit and thin gruel only are admissible. I find little trouble from unpleasant

sequelæ, and believe that simple hygienic treatment prevents much of the unfavorable conditions following an attack of scarlet fever.

Erysipelas.

Viola: In many points erysipelas resembles the other eruptive fevers, being ushered in with such premonitory symptoms as chilliness, languor, frequent pulse. The throat is almost always sore. Nausea and vomiting, and frequently diarrhœa, are present. Soon some part of the face, one cheek, or ear, or side of the nose, begins to feel hot and tingling; and, as the redness and swelling are extended, they are well defined by an elevated margin, which advances until the whole face or scalp, or both, are invaded. Sometimes the inflammation is quite superficial, at others it is deeper, and even suppuration takes place. After three or four days the swelling subsides and desquamation takes place, and the inflammation creeps along from one part of the surface to another; the face or part first affected will be growing pale and covered with patches of dead skin, while the scalp is becoming red. There is a good deal of difference in these cases. There is generally mild delirium — sometimes there is great prostration.

Treatment.

Doctor: There should be no effort made to *shorten* the disease, nor to check its spreading, as is too often done, and which efforts are always attended with hazard.

These are considered perilous cases, but I have found none that were not liable to yield readily to good nursing.

I have always met these cases tenderly. The very first thing to do is to clear the bowels. Give one, two, or three full injections of very warm water. After these pass off, if there is nausea, drinking freely of warm water, producing emesis, then sips of hot and cold, alternately. A hot foot-bath of three minutes. Let the patient remain quiet and warm, and, as fever becomes general and the characteristic symptoms assert themselves, give a thorough sponge-bath, using hot water in which a spoonful of sal-soda is dissolved.

Foment the inflamed surface—it can scarcely be overdone —an hour or two at a time. Give a full injection daily, after applying the fomenting-bag to the liver and abdomen for forty minutes previously. The spine may be sponged in hot water at any time for a few moments, greatly to the relief of the patient. If the throat is troublesome, foment it fifteen minutes, then apply cool compress well covered with dry flannel. The fomentation may be repeated about three or four times a day, or oftener if necessary. Absolute quiet, fresh air, comfortable temperature, and very little food—bran-tea, rice-gruel, and fruits.

CHAPTER XII.

INFLAMMATION OF THE THROAT AND LUNGS.

Diphtheria.

Viola: "This disease is sometimes preceded and usually accompanied with fever, which, in certain epidemics and in severe cases, is only transient, speedily giving place to depression.

"There is often a stiffness of the neck at the beginning of an attack, and usually more or less swelling and tenderness of the glands at the angles of the lower jaw. The tonsils are commonly swollen, and, together with the immediate contiguous parts of the mucous surface, more or less inflamed. Sometimes the swelling and inflammation subside without further local mischief; at others the inflamed surface presents, from an early stage of the disease, whitish specks or patches, or a continuous covering of a membraniform aspect, which may appear as a mere thin, almost transparent, pellicle, but usually soon becomes opaque, and in some cases assumes the appearance of wet parchment or chamois leather. This membranous concretion varies in color from being slightly opaque to white, ash-color, buff or brownish, and, in rarer instances, to a blackish tint.

"This false membrane is a true exudation which has coagulated upon the mucous surface, from which it may often be readily separated, leaving the subjacent membrane mostly unbroken or merely excoriated, usually reddened, vascular, tender, and dotted with small bloody specks or points, but sometimes superficially ulcerated, and more rarely in a sloughing condition. When the false membrane has been artificially removed, it is apt to be renewed, and, when not meddled with, to become thicker by continued exudation from the mucous surface.

"The severity of the disease is commonly in proportion to the continuity and density of the exudation; but cases sometimes occur in which the membranous exudation is inconsiderable, and yet the general symptoms are of a very alarming kind. If the patches are small and remain distinct, the case ordinarily runs a favorable course; if they rapidly spread and coalesce, if the membrane becomes thick, and especially if it assumes a brownish or blackish color, danger is imminent. In proportion as the membrane increases in thickness and density, does its attachment to the subjacent surface generally become firmer. The surface of the mucous membrane around the exudation is red and vascular, and so tender that in severe cases it bleeds on the slightest touch.

"The throat is, in general, the primary seat of the disease, but the inflammation is apt to spread along continuous mucous surfaces, and thus to extend upward into the nose and to the conjunction, down the pharynx into the œsophagus, through the glottis into the larynx, trachea, and downward into the bronchial tubes, or forward on to the buccal mucous membrane, the gums, and lips.

"Wounds and excoriations of the skin, and the mucous membrane of the nymphæ and vagina when tender or irritated, especially in persons already suffering of diphtheria of the throat, are, during an epidemic, liable to undergo the same process of exudation, which, coagulating, forms a false membrane analogous to that on the tonsils and throat."

"After a time the false membrane is thrown off — either entire, so as to represent a mold of the parts it covered, or, which is more usual, comes away in shreds or flakes intermingled with mucus. Sometimes it undergoes decomposition prior to separation, giving rise to a very offensive smell. When the membraniform exudation has come away spontaneously, it is sometimes repeatedly renewed ; each successive false membrane becoming less and less dense, having less and less of the character of exudation, and more and more of that mucous secretion, until at length the affected surface is merely covered with a thick mucus, which gradually disappears as the mucous membrane recovers its healthy condition. In other cases the exudation is not renewed when it has once been thrown off,

but the subjacent membrane is observed to be either redder or paler than natural, has a rough, rugged appearance, or is depressed below the adjacent surface on the parts where dense, false membrane has existed. Occasionally, sloughing takes place beneath the exudation, or even more deeply, as in the center of a tonsil, and may implicate the tonsils, uvula, and soft palate. More rarely the tonsils suppurate.

"Hemorrhage from the nose and throat, independently of the co-existence of purpuro, often occurs in the course of diphtheria, and is sometimes very profuse. The local affection may pass into a chronic form, in which relapses or exacerbations are readily produced by vicissitudes of weather or by exposure to damp or cold.

"Even perfect recovery from an attack affords no immunity from the disease in future.

"A peculiar character of the voice, resembling that produced by affections of the throat in secondary syphilis, is a common result of diphtheria, and often continues for many weeks after recovery. The power of swallowing is sometimes so impaired that there has been difficulty in sustaining life during convalescence; and the liquids especially are apt, even after a comparatively slight attack of the disease, to be regurgitated through the nostrils. Extreme anæmia, impairment of vision, a peculiar form of paraplegia, weakness of the hands and arms, numbness, tenderness of the limbs, tingling, wandering pains, and, more rarely, nervous sequelæ of a hemiplegic character, are, in the order here written, ulterior consequences of diphtheria.

"Gastrodyma and sometimes dysenteric diarrhœa occasionally follow diphtheria."

This disease appears under so many forms, differing as each individual differs, that pages and pages might be occupied in describing it, but it would scarcely further our purpose to seek other than to know we have a case of diphtheria. Now,

How Will We Treat It?

Meet the symptoms with *promptness* at the onset. If the patient be a child, place him in a tub of as hot water as can be borne. Dip the water over the throat, rub and manipulate the

throat and chest and abdomen with the hand while in the bath; add more hot water, and let the whole bath occupy five to seven minutes. If an adult, the hot sitz and foot bath will answer, should it be inconvenient to use the full bath. Now wrap the patient in a dry, warm sheet, rub briskly dry, and put him in the warm half pack. Wrap well the legs and arms in flannel, and apply to the throat hot fomentations for an hour or so, giving frequent sips of hot lemon water, or pure hot water, alternately, if the patient desire it, with sips of cold water. If the case be severe and the throat symptoms persistent, continue the fomentations until there is some abatement, even if it be longer than one hour.

Soon as the patient is rested after the bath, perhaps in half an hour, a full enema of hot water and glycerine (a spoonful of the latter added to the hot water) should be given, clearing well the bowels. This can be administered while the patient is in the half pack, thus preventing fatigue and exposure also. The half pack will come only to the hips — is really only a wide bandage. Now apply warmth generally.

Place bottles of hot water to the feet and give frequent sips of hot water, continuing the fomentations unless there is a subsidence of symptoms warranting the application of cool cloths to the throat well covered with dry.

There is much liability to mistake the worst symptoms in this disease for better. People are apt to think that *fever* is something to dread, and that it consists in external heat, and that only. I have been made so anxious when attending cases where the danger was great, but because there was no fever, as the friends said, it was thought not alarming.

In diphtheria I have treated cases where there was coldness of the surface rather than high fever, and also where there was very slight affection of the throat; yet it was not a mild case, but a very bad one. Nausea and vomiting occur sometimes. This will be met as in other cases. Sips of hot water, or even free drinking of warm water to produce emesis at first, then applications of cool wet cloths to the pit of the stomach.

Keep diphtheritic patients *entirely quiet.* Have the room well aired, rather cool than warm, and let the atmosphere be kept somewhat moist by allowing a dish of water to be kept

boiling, at least to so high a temperature as that pretty rapid evaporation may be instituted.

The wide bandage or half pack may be resorted to in most cases with wonderfully pleasing effect. I use the *mustard pack* sometimes. Wring the bandage from strong mustard water. This may be kept up about an hour, or until the surface is well reddened; then follow with the mere warm, clean bandage. In cases where there is coldness of the surface and nausea, this is particularly useful.

Let nature work unhindered, here as ever. The enema may be repeated once a day, or at morning and night. Once a day a thorough soap and towel bath, adding ammonia to the water, *hot* water, sponging but a portion of the surface at a time, and follow this with a thorough rubbing with dry flannel for ten minutes.

Rest.—Allow all the rest possible. No food should be given until the symptoms decidedly abate. Juices of fruit or lemon water without sugar, and crust-tea, hot and clear, may be taken.

In the daily enema, castile soapsuds, or glycerine, or sweet oil may be given. An adult may frequently gargle the throat with hot and cold water, alternately. A child will scarcely do that, and a neat swab may be substituted.

Great care should be had in the use of this. I seldom find need for it.

As the case approaches convalescence, watch carefully the tendency to overestimate the strength of the patient.

Enjoin absolute rest and quiet. Do not encourage a child to talk or play or "notice things." This is a tax which cannot now be well borne. Husband all the vital resources; they are needed. This is a critical period in the case. When food is allowed, it must for several days be *only* bran-gruel, or thin rice-gruel, with baked apples, or ripe, fresh fruit in moderate allowance.

If animal food is craved, a small piece of broiled steak (rare and masticated well, rejecting the pulp) *may* be given, but is scarcely to be recommended.

For several weeks, during and even after convalescence, it is well to wear the throat compress at night, bathing the throat next morning in cold water and rubbing it well.

Also dry rubbing of the whole surface of the body should be practiced every morning for weeks following an "attack" of this disease.

Doctor: How often we hear a person who is affected with chronic laryngitis, or bronchitis, or pulmonitis, say, "I have taken a severe cold," or, "My cold gets worse and worse." In fact, in all diseases of debility, the symptoms of "common cold" present themselves whenever there has been undue tax made on the vital force.

Now, if the real morbid condition which has become, or is likely to become, a permanency, be *congestion*, how can we so exercise vigilance as to avoid this depressing result? In the words of Dr. Reuben, I would say, and this applies to those who have already some chronic malady fastened on the system, as well as to the healthy: "The prevention of colds is secured *by the use of all those means that give strength and endurance to the general system, a healthy action to the skin, and force to the circulation.*"

Treatment.

When the cold is coming on, and the sufferer knows pretty well what the sensations are, so as to be able to tell,— when there is sneezing, discharge from the eyes and nose, chilliness, feverishness, perhaps a dry cough and difficulty of breathing,— there must be removal of *everything that tends to tax the vital powers*. *Rest* and warmth must be supplied. It is now, when in its forming stage, that it can be more easily "broken up" than afterward.

Of course, the case differs with the cause which induces the disease. But, in any case, the patient should go to bed; first taking a hot foot-bath of three minutes. Cover well, and drink warm water or hot water; and, if perspiration is induced, it may be continued for an hour or two.

It is well to invite this condition by putting hot bottles to the feet, the fomenting-bag to the liver, and, if necessary, hot bottles to the back; thus answering the purpose of the vapor bath, which is very efficient in these cases.

After an hour or so a warm or hot sponge-bath may be taken, and at the same time a full enema of warm water —

though it is well to take an enema at first, as there is some constipation usually—and the free washing out of the bowels unloads the system just so much of effete matter. It is an internal bath, and quite as useful as one applied to the external skin.

There should be *no food taken* until the symptoms of convalescence are pretty well established.. By observing this plan, the liability to serious diseases which are apt to follow a common cold almost, if not quite, entirely disappears.

Viola: The *dry cure* is recommended. The patient to abstain entirely from drink or fluid food, until the catarrhal symptoms have disappeared, which will be in most instances in about forty-eight hours.

Dr. Watson says: "The principle here concerned is that of cutting off the supply of watery materials to the blood. *The wants of the system exhaust from the circulating fluid all that can be spared for the natural evacuation, and there is nothing left to feed the unnatural secretion from the inflamed mucous membrane. Its capillary vessels cease to be congested;* the morbid flux is diverted, and the inflammation starved away."

Doctor: Any one will see that this *dry cure* has great advantages. It is simple, no trouble at all, and *sure;* based upon physiological fact; and a person can go about ordinary business while the cure is going on, if necessary.

Colds.—Acute Catarrh.

Doctor: "I have taken a cold," "I have a bad cold," "Oh, it is only a cold," is easily said, but the fact may induce very serious consequences.

Julia: The very name, *cold*, suggests something which is very far from the true nature of the malady, perhaps, at least from the true nature of its cause. While cold is *a* cause, it is not the only one.

If a person has lived in a heated atmosphere, has taken but little or no exercise, he will have less reactive power, consequent on the debilitated state of the capillaries of the skin and the enfeebled circulation, hence it will take no great degree of atmospheric cold or no prolonged exposure to induce acute catarrh. One very prolific source of colds is found in the manner with which clothing is distributed over the body.

In its *inequality* in particular, and this is true of women more than of men—parts of the body are overburdened with clothing, while others are exposed with scarce any protection. It is a means by which the circulation is rendered unequal.

Viola: Coming too suddenly into a heated room after exposure to cold will interfere with the reactive powers; it is better to allow the warmth to come gradually.

Dr. Levi Reuben says: "There is a set of causes which, independently of temperature or exposure, produce genuine colds, marked by the symptoms, course, and results common to these ailments. The most important, *because most frequent*, of these, are *repletion* and *exhaustion from fatigue*.

Repletion, or Plethora.

A surcharge of the blood with solid or liquid matters through the digestive organs is, in this gormandizing age, a far more frequent cause of colds than the majority of the sufferers at all suspect. The *eating mania* is the first great weakness of civilized races! The world, having come down to us successively through its golden, silver, brazen, and iron ages, seems to be luxuriating now in the age of pudding! And very naturally—pardon the nauseousness of the truth—the age of pudding is an age of *pus*; where so much uncalled-for material is crowded into human bodies, some of it *must* find its way out by offensive, inconvenient, life-destroying methods. To return: An overfull meal, taken at any hour of the day, by at once overtaxing and clogging all the operations of life, destroys the balance of the circulation, checks the action of the skin, gives rise to feverishness, and may produce or reawaken a bronchitis, a catarrh, or any similar difficulty.

Fatigue Carried to the Point of Exhaustion

may produce all the mischiefs commonly ascribed to cold. We see this both in cases of positive overwork in a state of comparative health, and in relative overwork, sometimes extremely slight in amount, where disease already exists.

Quinsy.—Inflammatory Sore Throat.—Tonsilitis.

Doctor: These do not require any separate consideration, being about the same in kind and varying much in degree. What are the symptoms of quinsy?

Viola: Quinsy usually makes itself known by difficulty of swallowing; dryness of the fauces; general feverishness; often decidedly inflammatory fever, severe headache, rapid pulse, etc.

The throat is more or less affected, according to the severity of the attack. Sometimes the patient is unable to swallow, the tonsils are so enlarged. The outside of the throat is swollen.

This inflammation terminates itself in resolution or suppuration; more frequently in the former. When the difficulty of swallowing decreases and fever subsides, it may be known that suppuration will not take place; but if the inflammation is intense (persistently so), the swallowing difficult, breathing impeded by the swelling of the tonsils, a pulsating pain is felt shooting to the ear; when there is much external swelling, suppuration may be looked for.

When the abscess bursts, relief is had at once. Sometimes the amount of pus is so inconsiderable that it is not noticed, except, perhaps, by a fetid, bad taste. This form of sore throat is not dangerous, though very painful.

Treatment.

Doctor: Apply fomentations to the throat continually, or alternating with the cool compress. It is well to bring the compress over the ears, fastening it at the top of the head, and covering with a large piece of flannel. Sips of hot and cold water, and copious drinking of hot water, should be perseveringly followed.

If fever is high, the warm half pack may be used about two hours each day. Follow this with a general soap and hot bath.

The abdominal bandage may be worn at night.

Full enema once a day. Entire abstinence from food.

A hot foot-bath may precede the half pack after the first or second day, omitting the general bath unless fever is persistent.

Quiet and rest; pure air to breathe; the feet kept warm. The treatment for

Common Sore Throat

may be less vigorous. Fomentations applied for ten minutes at bed time, then put on the cool compress well covered with dry flannel. A large quantity of flannel, half an old blanket or an old shawl, wrapped about the neck is not too much.

Here is where mistakes are so often made and good results missed. Too lightly covering the compress does not answer the intended purpose. Free hot water drinking and abstinence from food until the inflammation subsides, if quick recovery is desired. A good bath and rubbing of the skin, if fever is present, and keeping the bowels well cleared.

Tonsilitis is about the same thing, and calls for similar treatment.

It is well, after an attack of sore throat, to wear the wet compress several nights, washing the throat in cold water next morning. This gives tone to the weakened vessels.

Croup.— Inflammation of the Trachea.

Doctor: How is this disease characterized?

Viola: By difficulty of breathing; hoarseness; a ringing cough, which, when once heard, will be distinctly remembered; the cough is followed by a "*crowing* inspiration."

There is inflammatory fever; frequent and hard pulse; thirst.

The attack is most liable to come on in the night either altogether unexpected, or preceded by a cold, sore throat, or catarrh.

Treatment.

Doctor: Apply to the throat very cold wet cloths, well covered with dry. Keep the child in bed. Rub, with the dry hand, the back and limbs, and continue this until a hot bath is made ready; renewing the cold cloths to the throat every few moments. When the room is made very warm, and the bath at hand, place the child in the hot water, as hot as can be borne, and rub the chest and abdomen and the whole body very

briskly. Add more hot water, and keep the body (even to the neck) immersed.

Have a dry hot sheet ready, in which to wrap and rub dry the little patient. If fever is high, now put on the abdominal bandage wrung from warm water. Cover well with dry flannel—a small blanket, or even a good-sized one, is none too much. Apply again the cold wet cloth to the throat. Keep the feet warm; and, if the breathing is not easier now, foment the throat and upper part of the chest for twenty minutes alternately with the cold compress.

Pat and rub the back and chest. Manipulate the arms and legs. Give drinks of hot water and of cold. Follow the symptoms with all "diligence." Do not relax effort until the breathing is liberated. If the bowels are not free, give full warm enema.

If there is tendency to coldness of extremities, give hot foot-bath occasionally; also apply dry flannels heated very hot to the throat, if they seem more agreeable than the hot fomentation.

Keep the patient in a warm, well-ventilated room. Give only baked apple, or toast water, or gruel, as food, until the symptoms yield positively.

Mumps (Parotitis).

Viola: This disease often prevails epidemically.

It usually affects children and young persons, and is contagious.

The parotid gland swells; swelling beneath the ear, the chin, and all around the neck, deforming the countenance curiously.

It affects one side only sometimes, but usually both.

The swelling is hot, tender, and painful; the lower jaw can scarcely be moved. In about four days the disease begins to decline, and usually lasts in all about ten days.

Sometimes the swelling suddenly becomes transferred to the mammæ in the female and to the testicle in the male, and may oscillate between the throat and the mammæ or testicle. Metastasis to the brain is known to take place also, but this is rare.

Treatment.

Very little treatment is necessary. Apply warm cloths to the swelling; let them be kept on constantly.

If there is general feverishness, a tepid sponge-bath and enema of tepid water. A little gruel or bran-tea as food.

Keep the patient comfortably warm and quiet. If metastasis to the parts named occur, a warm sitz-bath or fomentation to the affected region will give relief. Keep the feet warm.

Should the brain become affected, give *very hot* sitz and foot bath ten minutes. Follow this with enema of hot water. Apply cool cloths to the head, or, if more agreeable to the patient, warm spongings. Let the patient be kept in bed, and seek to induce perspiration by applying bottles of hot water to the back and feet, and drinking of hot water.

In fact, the treatment now should be the same as for inflammation of the brain.

Pneumonia.

Viola: This formidable disease is seen in such a variety of symptoms that it would be idle to give more than the general signs; in fact, these are all that is required to meet the indications for treatment. It is immaterial, so far as remedial measures are concerned, whether the lung is affected in one or another portion. The whole membranes become involved, and the treatment should be the same. In the largest number of cases the commencement of lung fever is marked by chill, followed by fever, and at the same time a sense of oppression in the chest. It frequently steals on insidiously—a dry cough at first, but soon attended with the characteristic expectoration.

Pleurisy in some degree is present when there is pain in the lung or on one side of the chest; this pain is aggravated by cough or a full inspiration, sometimes by turning over in bed or pressure on the ribs; and from observation I conclude that when there is no sharp pain in the side or chest there is no pleurisy. But there is a sense of weight and oppression, sometimes of heat, on one side or throughout the chest. One lung is almost always more affected than the other. Difficult

breathing, hurried respiration, and inability to talk without stopping to take breath, may be present, and yet the patient will deny having shortness of breath; again, he is wholly occupied with respiratory efforts. This symptom, laborious breathing, varies much in degree and kind in different cases.

The brain is frequently congested in pneumonia—delirium also sets in; it is a bad symptom, showing the lack of due arterialization of the blood because of the extent of the lung affection.

The character of the expectoration in pneumonia is well marked. It is of such viscidity that the vessel containing it may be strongly shaken and turned upside down without detaching it. The color of the sputa is clear or rust-colored, and may remain so for days, when, if the inflammation recede, it becomes more like the expectoration of catarrh, and has less and less tenacity.

While these colored and tenacious sputa are peculiar to pneumonia, they do not *always* accompany it. Sometimes the expectoration is like that of catarrh, and sometimes there is scarcely any at all.

Typhoid pneumonia is simply congestion in inflammation of the lungs, with those symptoms which attend typhoid fever. It is not necessary to particularize symptoms here; to know how to meet those symptoms is of more practical importance.

Treatment.

Doctor: There is so much apprehension felt regarding pneumonia that people are liable to do the very worst things in their anxiety to find suitable remedies. I hope not to cry "peace, when there is no peace," but I would delight to impart a feeling of quietude to both patients and friends, and thus enable them to work smoothly and trustfully. At the onset, if with constitutional febrile symptoms there is local pain or oppression of the chest, I would first give a hot foot-bath five minutes, during which time drink largely of warm water. When the feet are thoroughly rubbed, the patient should be put in bed, bottles of hot water placed to the feet, the fomenting-bag on the chest, having a small towel, wrung from hot

water, placed under the bag. Give now hot lemonade or hot water to drink. As the fomenter cools, renew the hot water; keep this application on the chest for an hour or two. Then, if there be no chilliness to prevent, apply a cool compress, wrung dry, to the fomented surface, and cover with great abundance of dry flannel. Now place the fomenter on the liver, where it may remain an hour; it may be moved to the spleen or abdomen at times. If the cool compress is not entirely grateful, remove it and place a piece of dry hot flannel over the chest. For children I often recommend this, and entirely discard the compress. The chest, in this case, should be rubbed a few moments with the bare hand, dipped in cold water. The feet should be kept warm. On removing the fomenter, press gently, and rub the liver and abdomen a few moments. Give freely to drink of hot water or lemonade, with occasional small quantities of cold water, if it is desired. After the patient has rested an hour, again apply the fomenting-bag to the chest, and let it remain half an hour, when apply dry hot flannels on the chest, and foment the liver forty minutes. After this, administer a full enema, and manipulate the abdomen while it is retained, placing a folded towel to the anus. Repeat this.

After resting half an hour or so, a hot soap and towel bath may be given, or hot sitz and foot bath, which may combine the two. Be very careful to have the room quite warm, and the patient protected from every possibility of adding to the malady by "taking cold." After thoroughly washing and rinsing the surface, let a dry sheet be wrapped around the patient, placing him in bed and covering immediately. The attendant will now rub the whole body and limbs under the covers.

Manipulations and squeezing and pressure on the lower limbs and thighs, and along the spine, are very grateful now and beneficial. After putting on the night-clothes, the patient should be allowed to *rest.* If the pain is importunate, keep the fomenting-bag on the chest any length of time.

Bronchial cough and tickling will be relieved by this and by sips of hot water. The patient *must not talk;* must not in any way exert himself; must take *no food*, save very thin gruel or bran-tea, or a little nice fruit. Entire fasting is quite as well, so long as the lungs are engorged.

I have myself been the subject of very severe attacks of pneumonia, and being so situated sometimes that I could have no medical aid, or even good nursing, I simply remained in bed, had my feet kept warm, drank hot water, applied the fomenter, and ate *nothing* for a week.

If the brain is congested, apply hot cloths to the spine for five minutes, about once in half an hour. If, as is sometimes the case with children as well as adults, there is a continued tendency to coldness, do not attempt to use the cool compress.

Give daily injections, always preceded by fomentation, to the liver one hour. Abundant rubbings and manipulations are useful. As symptoms abate, give less treatment; and now, as always, allow abundant *rest.*

In very severe cases, where there is coldness and obstruction of the lungs, etc., give a hot mustard-bath five minutes, or sitz and foot bath, if an adult. A child can be placed in the bath so deeply as to cover the chest. Immediately throw a dry warm sheet around the body on leaving the bath, and apply the hot fomentations to the chest. Dry rubbings to the chest are leading remedial measures. Sweet oil may be put on the skin, so as to prevent irritation from rubbing. Drinking of slippery-elm tea or flax-seed tea is admissible. The convalescent should be cautioned against making exertion of mind or body for several days after he feels well, and should live on simple fruits and grains.

The chest should be daily rubbed with dry flannel; in fact, a dry rubbing of the whole surface will aid in restoring lost balance.

CHAPTER XIII.

ACUTE STOMACH AND BOWEL AFFECTIONS.

Acute Gastritis—Inflammation of the Stomach.

Viola: A burning pain is felt in the stomach; vomiting, especially if anything, even a spoonful of water, is received into the stomach, hiccough and tenderness in the upper part of the abdomen. The fever attendant on these local symptoms is, I believe, always of a low type, small pulse, and becomes thready and feeble. The whole muscular system is depressed, the patient pale and faint, the features collapsed, extremities cold, the skin cool and damp. The breathing is short and constrained; there is the appearance of great anxiety and restlessness. The sufferer begs for drink, and if it is given, it is almost instantly rejected by vomiting.

The bowels are constipated generally, though sometimes diarrhœa sets in, with griping and tenesmus.

Treatment.

Doctor: This disease is rapid in its progress. It must be met with promptness; there is no time for vacillation or experiment. At the same time the treatment is simple, and is liable to take effect early. Apply *cold* cloths to the stomach. Fold the cloth in six or eight thicknesses and about four inches square. Place this at the "pit of the stomach." Apply the fomenting-bag, or flannels wrung from hot water, to the abdomen for an hour. Frequently change the cold cloths. Let the patient lie down. Have the legs and feet rubbed with hot cloths. Wrap them in hot dry flannels. *Allow no drink.* When the nausea is somewhat abated, a spoonful of *hot* water or hot crust-tea may be given at first. Let half an hour pass before any more fluid is given. Flannel cloths wrung from

strong mustard water and applied hot, as a half pack, well covered with dry flannel, may be resorted to when the patient seems to sink, and the surface grows cooler, while the intense thirst still remains. This half pack may be kept on until general redness of the surface is shown; then, on removal, a soap and water wash-off. Have a spoonful of ammonia in the water. Let only a part of the surface be subjected to the washing and rubbing at one time.

Continue to foment the abdomen half an hour out of each hour, and once in four hours give full enema of very warm water, until the nausea and vomiting subside.

At any time when these symptoms abate, and the patient is inclined to rest, do not allow him to be disturbed, even to have treatment. It is hard to deny one drink when so tormented with thirst, but I believe it should be done. *Never* give cold drink in these cases. The application of cold cloths to the stomach may be continued at the same time the hot fomentations are given to the abdomen and liver. Thin gum-arabic water may be given, a teaspoonful at a time, cool, not cold, when it is found that the hot water is retained. Be very cautious in the beginning to allow no fluids taken on the stomach.

The convalescence is troublesome, in that a little too much of even the most appropriate food will be hazardous.

A little mutton-broth, removing all the grease, and bran-gruel added to this, is generally well received. If the case has run very low, a little nutriment may be given once in four hours during the day—none at night. This should soon be superseded by the three regular times of eating as in health. If the patient be an adult, let rare beefsteak be masticated, the juices alone swallowed, and unleavened crackers, made of sifted Graham flour and cold water, rolled very thin like wafers, well baked and crisp. Let no fluids be taken within an hour of such a meal.

Sub-acid fruits *cooked*, or very ripe fruits, rather the juices, are grateful. Let the mind be kept cheerful, but have no tax on it in any way. Quiet of both mind and body is imperative.

Enteritis—Inflammation of the Bowels.

Viola: Pain in the abdomen; vomiting; obstinate constipation; tenderness on pressure of the abdomen.

The pulse soon becomes small and wiry; the abdomen swells and becomes tympanitic; the intellect is usually clear.

This differs from *colic* in some symptoms, while they have much in common. In colic, the patient finds relief from pressure; in change of position, too, he gets into twisted and prone attitudes; while in inflammation the patient lies on the back mostly, knees drawn up, and if he moves at all, it is only the legs and arms; the body is fixed.

Treatment.

Doctor: Foment the abdomen one hour, after which give small enema—about one quart of warm water.

Then repeat the fomentation half an hour; follow this with the cool compress, covered with dry flannel. Free drinking of warm water, slightly acidulated with lemon. The feet placed in a hot bath of mustard water five minutes; rub dry.

In two hours after the first enema is given, it may be repeated, using as hot water as can be received. The abdomen need not be manipulated. When this passes off, a cooler one may be given, to be retained as long as possible.

The half pack may now be used, if there is general fever, and the surface hot and dry rather than cool and clammy. It may be continued one hour. Follow this by general sponging in hot water, and thorough rubbing and manipulating of the lower limbs. *These manipulations are very beneficial in inflammations of the viscera.* Persevere in the use of fomentations and cool compress, as local measures, also the full enema.

It will be obvious, when we glance at a few of the causes of this affection, that the full injection would be especially indicated in these cases, particularly after relaxation is produced by the fomentation.

Among the causes are "hardened fæcal matters, concretions in the intestines."

Dr. Watson says: "Persons who are in the habit of taking magnesia or chalk, to relieve acidity and heartburn, are liable

to have these substances accumulate and become indurated in the intestines. They generally begin to collect, I believe, around some accidental nucleus, and such a nucleus may very readily be supplied."

I have instructed people not to swallow the seed of grapes, and for the same reason.

Carditis—Inflammation of the Heart.

Doctor: This disease is so complicated with acute rheumatism that it seems scarcely a distinct affection. It is surprising how almost universally the subjects of this disease have at the time, or previously had, some form of rheumatism.

This is a very interesting subject to the student of pathology; but for all practical purposes, so far as treatment is concerned, I need here only give the general symptoms.

At first there is a general appearance of distress to the countenance—not the anxious look of typhoid fever. I can hardly describe it. There is a feeling of oppression in the region of the stomach; breathing is irregular; a catch and dry cough; the patient cannot lie on the left side; pain in the region of the heart, increased by full inspiration; the left shoulder is stiff and painful, even the whole left arm is affected; there is furious delirium sometimes, and again it is mild, but the brain is not apparently affected. There is general fever, if the disease is not an accompaniment of rheumatism.

All of these symptoms are not likely to be present in any one case. It is difficult of diagnosis.

Treatment.

To save space, as well as trouble of repetition, I would refer to pneumonia, giving the same treatment, if the disease occur somewhat distinct from rheumatism. Also to inflammatory rheumatism, if it be an accompaniment of that disorder, treating the special complication as a local inflammation.

Cholera Infantum.

There is such an amount of mortality among children, produced by this affection, that I feel it should have rather ex-

tended description. It is endemic in all large cities, if not in the country, and children from four months to two years are its marked subjects.

Viola: The "second summer" of an infant's life is considered one of great peril, and justly so, as during the first period of teething this complaint is liable to "seek the young child's life." It is marked at first by profuse diarrhœa, the discharges very light color, and fluid sometimes pale yellow or green; severe irritability of the stomach ensues, everything taken into the stomach being rejected immediately.

After a short time the discharges from the bowels are a colorless and inodorous fluid, discharged without the least effort, but there is some tenesmus. The vomiting may be discontinued while the discharges from the bowels continue or even increase, the irritability of the whole intestinal canal being so great as to cause whatever is taken as food or drink to pass off rapidly without changing at all. The subject of this disease becomes languid and prostrate, even a few hours after its onset, and emaciation takes place so rapidly as to surprise all who have not before seen such cases. The pulse from the beginning is quick and often tense, the skin is very dry, the head and abdomen are hot, while the extremities are cold. The thirst is intense, "the child suffers pain in the abdomen, as is indicated by its fretfulness, low moaning cries, frequent change of posture, the drawing up of its knees, and its occasional acute screams."

This disease is apt to be protracted and pass on to more severe stages, the bowels becoming tender; their discharges, which continue to be frequent and profuse, are dark-colored and very offensive, the surface of the body cool and clammy, and extreme emaciation ensues.

Treatment.

The little child must be *nursed* back to health. No decidedly medical treatment is necessary. Ascertain the *cause*, and remove that, if possible. If the cause be mainly in the atmosphere, remove the child from that locality first. But if that be impracticable, there is no need to despair of the case;

bring about the next best possible conditions. A daily, or twice daily, dry rubbing of the whole surface for ten minutes—perhaps night and morning. The feet kept warm by wrapping in dry, heated flannels, a bandage wrung from warm water worn over the abdomen almost constantly, removing it at very early morning, and substituting a dry flannel bandage, to be worn until about 9 or 10 o'clock A. M., when a warm bath may be given, once in two days. Full enema of warm water may be given following the third movement of the bowels; this may be retained a time. Thin bran-tea made warm may be used instead of clear water. The child must be kept quiet, allowed to sleep at all times when sleep can be induced. If there is evidence of pain in the abdomen, apply soft flannel cloths wrung from hot water and well covered. Give a teaspoonful of hot water at a time, occasionally the same of cold crust-tea or cool bran-tea. If the child is nursing, let the mother live on simple, wholesome food, good unbolted bread, and good fruit, with a sparing use of meat once a day, if that is the habit. I do not *recommend* the use of meat. All the conditions of health should be observed by the mother, and for very obvious reasons. The milk is a secretion which is particularly affected by the state of the general nutritive and nervous system.

Bran-gruel, strained through a thin gauze cloth and added to good milk, equal parts, may be used as food if the child is not nursing. Toast-water also. I would observe regularity as to time of giving food; let the weakened, irritated stomach have its periods of repose. Once in four hours, during the day, is about the proper interval for giving the patient food. Keep the child in the open air; in the little carriage is better than in the nurse's arms. Let the sun shine on it, not on the face and head, but let the sun shine on it. Always, even if the weather be hot, have a fire in the room where the dry rubbing is given, or when the bath is given. And at early morning also have a little fire lighted in the room, even if the windows are open.

I could recount numerous instances where the case was thought entirely hopeless — it certainly appeared so — when careful hygienic nursing brought the little sufferer back to life. I believe it important that all the attendants be hopeful and

trustful; this affects the whole atmosphere about the patient. I have frequently dismissed mothers from the room where their sick child was cared for, knowing their influence to be depressing, because of the despair and hopelessness exhibited. This will not do. Children are killed by it. Women who are mothers must know they should be *heroes* in times of need like this.

Diarrhœa.

Doctor: Diarrhœa, as we have seen, is a frequent attendant on other diseases. But it is also frequently the main symptom of the illness we are called upon to treat. There are several varieties of this disease, but as the treatment is substantially the same, it is not necessary to give other than a sketchy glance.

The symptoms of diarrhœa are well known to all persons, I presume. "There are often nausea, flatulence, griping pains of the bowels, succeeded by stools of unnatural appearance and odor, and of watery consistence. There are often also a furred tongue and a foul breath; but the disorder is attended with little or no fever; the pulse remains of the ordinary frequency, and the temperature of the body does not rise."

These cases have irritated mucous surfaces of the bowels, caused by, perhaps, improper food as to quality or quantity, which produces the effect of slightly irritant poison; for whatever of food is not used, though it be of proper quality, will, because of excessive quantity, produce such effect. Then, as the alvine evacuations are more frequent, loose, and watery than usual, they are so because the secretions are poured into the intestines more copiously than is natural; the peristaltic motions are more strong and active, producing more frequent discharges, and evidently these efforts are those which the system sets up to get rid of the offending substances, be they from whatever source. Full enema of hot or warm water, followed by full one of cool, is the first thing to be done. If there is nausea, drink copiously of warm water to produce emesis, then place a cool cloth to the pit of the stomach. Hot fomentations to abdomen will relieve gripings. After each operation, give enema of warm or hot water; when this passes off, a small cool

one may be given to be retained, if there is much tenesmus. Otherwise this is not necessary. Only toast-water, rice-gruel, or bran-tea should be taken as food.

Dysentery.

Doctor: The difference between this and diarrhœa is plain enough, but some of the worst forms of dysentery *commence* with diarrhœa.

Viola: Inflammation of the rectum and descending colon is a prominent feature of dysentery. There are griping pains and frequent fluid evacuations; but in diarrhœa they are fæcal, while in dysentery there is discharge of mucus and blood, and the fæces are retained, or expelled from time to time in little hardened lumps.

There is in a simple form of dysentery but little fever, and it needs only that the patient *rest*—abstain from food, and take an occasional enema of cool water.

But unfortunately, this disease asserts itself with more severity. The pain is severe, fever runs high, the tongue is coated, headache and thirst, chilliness occurs. There is more or less tenderness of the abdomen and pain on pressure. The sensation as if there were excrement to be passed is a constant annoyance, and the irresistible impulse to go to stool, and strain violently, is followed by no relief of the irritation.

There are two kinds of dysentery, commonly known as the *bloody flux*, when bloody mucus is discharged, and *dysenteria-alba*, when a jelly-like white mucus only is voided.

"Frequently the ejected mucus is variegated in color; green or black, or reddish like the washings of meat, and horribly fetid." "Sometimes pain and difficulty in making water are added; there is *dysuria*, the irritation of the rectum being reflected upon the bladder and lower portion of the spinal cord. Sometimes the stomach sympathizes, and nausea and vomiting ensue."

With all this local suffering there is a continuance of febrile distress; the patient passes sleepless or dreamy and disturbed nights, and is low-spirited and desponding.

Ulceration of the bowels is a common attendant on these cases.

Treatment.

Doctor: The hot sitz-bath fifteen minutes, having the feet kept warm at the time by placing them on a jug of hot water, or on a hot brick. While in the bath the abdomen and liver should be gently manipulated by an attendant—a few sips of hot water taken every five minutes—the head cooled.

After the bath, and a thorough dry rubbing, place the fomenter over the abdomen, and allow it to remain forty minutes. Removing this, apply the wet bandage, wrung from warm water, and cover well with dry flannel.

After *each* movement of the bowels, give a tepid or warm injection, first at the onset of the symptoms, either before or after the sitz-bath, clearing well the intestines by very full enema of hot soapsuds. When the injection passes off, it should always be retained as long as possible; give a gill of cool water to be retained.

Repeat the fomentation of forty minutes, about once in two hours. If pain continue severe, it may be resorted to oftener. Also the sitz-bath. This may be used two or three times a day, if necessary. The patient should remain as quiet as possible; drink toast-water, or bran-tea only, as food.

Hot water may be drank, and occasional sips of cold water.

Apply the fomentations first to the liver and abdomen, then to the back, if there is much distress and tenesmus.

Manipulate the thighs and lower limbs every two or three hours, if the patient is restless; but always allow entire quiet whenever it can be had.

The tendency to frequent stool should be suppressed so far as it can be done. Very hot foot-baths of five minutes, given at times when there is pain "down the legs," as the patient often expresses it, will relieve and soothe. The liver may receive thorough manipulation occasionally after the fomentation is discontinued for a time.

As to food, very little can be given to advantage; in fact, so long as the severe symptoms are present, nothing more than bran-tea, or gruel, or toast-water. The convalescence must be carefully conducted. A little mutton-broth, and bran-gruel, and nice ripe fruit, rather the juices of fruit; all seeds of berries should be rejected now.

The patient should be kept warm, and breathe pure air night and day, and must avoid all things which tend to excite or exhaust the nervous system. A convalescence must not be forced.

CHAPTER XIV.

COMMON CHRONIC AILMENTS.

Doctor: There are various chronic ailments connected more or less with uterine derangement, and while it is not profitable to imbibe the miasm of symptoms of disease, existing conditions seem to call upon us to give them at least a "passing notice."

Pulmonary Consumption

heads the list. To gain anything of practical use to those who are looked upon as incurable, we must know that incurability is by no means a fact of this disorder; and then acquaint ourselves with its supporting factors, so as to know what and how to withhold. If it can be left *unsupported*, that will be greatly in advance towards prevention and cure.

Says Dr. Latham: "Pulmonary consumption is no more than a *fragment* of a great constitutional malady. But that malady plays its part most conspicuously in the lungs." Dr. Gully says: "Tubercle is never deposited unless there has been, and is, disordered assimilation of food. There never yet was tubercular deposit with a sound digestion." These facts have a highly practical value for persons who are suspected of having tendencies towards consumption or bronchitis.

Digestion will be considered and all its conditions; also whatever of social habits, employments, mental states, etc., affects the expression of vital power. Increase breathing capacity and digestive power, and consumptive tendencies are robbed of support. Incipient consumption is thus made curable, and the fatal event of advanced consumption may be postponed indefinitely. Even after the formation of a cavity, the reduction of congestion and return of functional power to the organs holds the case unaffected to any serious degree by the imperfect lung.

Viola: What is to be done in these cases? I would suppose the *digestive power* must first be brought up; but how?

Doctor: By giving it something to work for. Fortify the system by supplying good food, abundant facility for its assimilation, by employing passive exercise, mechanical massage, allowing freedom of every muscle, cultivating deep abdominal breathing; never allow stomach or chest encroached upon by improper stooping position. Say *no* to appetite. Poor, craving, dyspeptic stomach; gnawing, sinking, grinding, begging for something to eat—for a poultice of victuals; give it only a drink of pure hot water. That will relieve the discomfort. Eat enough, but not too much, not an *ounce* too much. Work out of doors, in the earth; let the sun shine upon you and about you. In the house the sun must have access to your room and bed. Clothes worn at night should be daily aired and sunned. Take up carpets and live on bare floors; rugs placed before the bed and at other places to step on, may be used, for these can readily be put out to air and become purified, while the floor is treated to a good washing.

Can you forget yourself? Become absorbed in something outside of the miasmatic atmosphere into which your ailments would plunge body and soul. Learn of the healing power, of the God-power within, of *life*, which is not generated or discoverable in the good food you select or the good treatment you may take, but ever flows from the All-Life. These things you do because so commanded by the laws which rightly relate your organism and food and treatment to each other. Through these acts of obedience and *faith*

"The Immortal Sap of a Divine Life"

is invited to "circulate through the minutest twig and leaf of your tree of life." This *life* is pressing to enter every avenue you unclose. Do nothing in thought or act, then, to shut out *life;* but rather give it free access to all the departments of your being. This is recognized as the *vis medicatrix naturæ* of medical schools, which, succeeding all the hinderances imposed by anti-vital agents, is depended upon to restore the patient. How much more certain is restoration under circumstances

which favor every expression of the life force and act in unison with it? Be cheerful, ailing one. Climb up into the higher rooms; think higher thoughts; *do* from higher motives, and blessings of the Highest are securely yours.

Liver Derangements—Biliousness.

Viola: I learn it is scarcely possible to find the stomach, lungs, brain, bowels, blood, etc., diseased, while the liver remains true to the right performance of its office. And why? The nerves which supply the stomach, etc., also branch to the liver, and the same mucous membrane which lines the inner surfaces, and forms the great external covering of the body, enters into and extends throughout all the bile-secreting recesses of the body.

Doctor: And that fact accounts for the general demoralized feelings of the subject when bilious attacks come on. No part of the frame has exemption. You may name some special features of liver complaint.

Julia: From my experience. Pain under the shoulder-blade, and on top of the right shoulder especially; a sense of tenseness in the right side, aggravated sometimes by breathing; a short, dry cough; inability to lie on the left side; great depression of spirits, apprehension, and dread of impending evil. Frequent bilious attacks; cured(?), and finally medicine fails to excite the liver to action.

Doctor: Your "bilious attacks" were an effort to eliminate from the blood materials the stomach and liver recognized as hurtful. An unusual amount of blood, congestion, was present in these organs. Nature's method of providing a free flow of mucus and bile relieved these distended vessels by *forcing out* the mucus and bile in great quantities, as is seen in bilious vomiting and diarrhœa. This is not a normal condition; it is not physiological, but *remedial* action, *tending towards* physiological action, by eliminating these offensive products of defective assimilation. The indication is to assist

Nature to Eliminate,

not by attracting more blood to the already oppressed organs, but by *diversion* towards other eliminating organs—the skin, lungs, kidneys, bowels.

Treatment for Bilious Attacks, Sick Headache, Etc.

Unload, eliminate, remove obstructions, and let nature have a chance to reconstruct. First, cut off supplies. Secondly, improve the opportunity to devote energy to purposes which aid in this eliminative work. If the head aches, take a hot foot-bath five minutes, during which time drink freely of hot water. After rubbing the feet dry, go to bed, place fomenter over the liver, and let it remain an hour. Should nausea and vomiting ensue, drink freely, and wash out the stomach. *Warm* water will, it is known, incite to vomiting, while sips of *hot water* are liable to quiet the stomach. Clear well the bowels with very full enema of hot water, or very warm; put on abdominal bandage, and return to bed. Soothing appliances of cool, hot, or cold wet cloths to the head, and something hot to the feet, if cold. Rest an hour or so, as long as at all comfortable. If symptoms persist, meet them with equal determination, until they are undermined. A hot sitz and foot bath is agreeable, if convenient, but the fomentation, with a soap and towel bath, usually answers as well. Drink unlimited quantities of hot water; add lemon-juice, if you like. *Eat nothing* until complete subsidence of the symptoms show that food, in small amount and of simple kind, may be gradually approached. Rest, and be patient and trustful, *knowing* this is the best "happening" that could come to you under the circumstances, and that such a course of treatment leaves you *clean*, and hints at such dietetic and general habits as will allow the system to remain pure and unobstructed.

Bilious Colic

should be met with about the same energy as another liver complaint; very distressing, and often very dangerous.

Passing of Gall Stones.

Relax the whole abdominal region; apply hot wet cloths, the fomenter over these, and all covered with dry flannel. Drink of warm water freely, persevere in these applications, as hot as the patient can endure. Soon as the pain subsides, so as to

admit of it, have the enema given, very full, and be sure to work the water well up in the colon. Hot fomentations between the shoulders, also, while the abdomen and liver are under the fomenter. A very good plan, where the second fomenter is not at hand, is to wrap bricks in damp cloths and apply to the spine. A jug full of hot water, the cork well secured, is convenient for that purpose. Very hot foot and leg bath of ten minutes, adding hot water to the last, and at the same time keeping the fomenter on the abdomen or liver, and drinking hot water, is about as good as a vapor-bath, and generally more likely to be available. Both these conditions are but paroxysms attending liver complaint.

In Enlarged or Engorged Liver

a great amount of oxygen is demanded, and quite liable not to be supplied, for lack of the call for it by the sluggish tissues. So a sort of arousing, exchanging, set-a-going line of curative proceedings should be joined with the more soothing, relaxing measures also indicated. Up to the limit of strength, active exercise, daily, in open air or well-ventilated rooms, must be taken, resting when too weary, but up and at it again, as though weariness were unknown. This is a tax on the will power, but useful. Rub the liver half an hour every night and morning with dry flannel, rub pretty vigorously. Wear the bandage over the liver every night, if this can be borne without chilliness. Drink hot water within an hour of eating, and in place of supper. Two meals, and the food scrupulously healthful.

Take No Animal Food,

not even eggs, butter, cheese, milk or cream. Use whole-wheat flour bread, grits, and fruits; vegetables sparingly. In constipation, use the fomenter over the liver twenty minutes daily, and clear the bowels with full enema, following with a cool one, of about a gill, retained. Massage, or voluntary movements, should form a part of every day's treatment, and the one who undertakes home cure would need to consult Dr. George H. Taylor's books on Movement-Cure and Massage. Mechanical massage wields a power here not reached by any one other

medical agent. It is a most lordly factor, to which all the others are compelled to make obeisance; and with a correct dietary, nourishing, sustaining, *pure* and right mental and spiritual attitudes, who may not justly claim a cure? Voluntary *labor*, "obsolete gymnastics," must take the place of indolence, inertness, and "a folding of the hands." Use up the surplus stock on hand, and do not add to the excess; keep up an even balance, just enough nutritive material for *use*, none for clogging the wheels; develop strength by diverting the vital currents to their natural channels, and in the bright sunlight grow toward health and happiness. The beautiful doctrine of the "unity of disease" is nowhere more verified than in these derangements, and the unity of cure follows as a consequent. The best chance of recovery lies in doing the things which advance the interests of the whole vital domain. Local measures, as suggested, to affect certain parts, are useful, but the general, efficient plan of treatment means simply, "Cease to do evil; learn to do well."

Hemorrhoids, or Piles.

This is not a primary affection, but is dependent upon some other organ, most generally the liver; as from whatever cause the blood, which should circulate freely through the liver, is obstructed, piles ensue. Bilious people have piles. Naturally, the blood from the whole abdomen circulates through the liver, passing through that great organ very freely; and you readily understand what must be the result of any preventing circumstance arising, causing obstruction of the passage, and necessarily allowing the blood to gravitate towards the lower parts of the digestive canal, thus resulting in *congestion* of the *rectum*, and this is "blind" piles, accompanied with its attendant symptoms, heat and pain. When the inflammation ends in the tissues, about the edge of the anus, the protrusion causes inconvenience, and is aggravated according as the digestion is disturbed.

Viola: The congested veins sometimes enlarge and protrude, swelling, giving heat and pain, and sometimes bleeding; this is called bleeding piles.

Julia: What a relief this bleeding is to the engorged tissues; but the mischief about the liver and stomach will soon

make occasion for another bleeding. Constipation is often present; but while it is thought to be a cause, it is probably rather a concomitant of the disorder; for what causes constipation causes piles.

I would not suppose any case incurable, unless it was sympathetic with a disorganized liver or lungs, or organic disease of the heart; even then much relief and comfort can be afforded the sufferer. Hygienic treatment is *infallible* for piles.

Doctor: Treat this as a symptomatic disorder. What will cure indigestion, liver disease, any form of malnutrition, will cure piles. Uterine disease, also, must not remain if piles are to be cured.

Mechanical Massage is Almost "Magical."

As a palliative, take *hot water* injections—*hot.* Retain this as long as possible, and after it is passed off and a short rest is had, inject a gill of cool water, about 80°, in which put a spoonful of glycerine as a "cleanser;" better than soap. Retain this entirely. Foment the liver daily for one hour. Wear the abdominal bandage every night.

There are ways of preventing piles, and incipiency is the time to begin their cure. Prevent them by preventing dyspepsia, of course. At stool there should be no straining whatever. There is a way of centering the will on this function, and any one may practice that. Twisting the body from right to left, and reverse, is often found an aid to evacuations that are tardy. After a movement of the bowels, weak women should always lie flat on the face for a few moments, or at least sit quietly. This habit of waiting a while after a movement is a good one for well people. Always press back any protrusion that follows evacuation; press firmly with a wad of soft paper. And where small, but painful, protrusions are pretty constant, take several opportunities through the day for lying on the back, knees spread apart, and with a towel wrung from warm water press back these, hold them; shake out the cloth, or wring it from cold water now, and press firmly against the anus. You will help to relieve the vessels, and pain will disappear. With care, and applying to the right sources, there need be no distress from piles. The rectum ought to be cleared,

when fæces are tardy or hardened, by a small enema after the passage. There are some articles of food which are like poison in these cases of piles: one is white flour bread, or biscuit; another, tea; sweets, also, and fats. But we are dealing with dyspepsia in this affection, and must look to that as the prime malady.

Dyspepsia.

A pitiable overtaxed burden-bearer is the stomach. Sick or well, its action is demanded unceasingly. We allow our arms, hands, legs, feet, backs, and heads to rest when they cry out too imploringly, but if the *stomach*, weary and worn, gives hint of fatigue or exhaustion, it must be *whipped* into extra labor. Send to it the lash of stimulation. Bring to bear all the weapons which promise to goad the failing tissues. If food in the stomach fails to undergo the proper changes, and acid eructations ensue, a dose of soda will sweeten the mass and make inroads upon the mucous lining of that organ, so another condition ensues—torpidity or loss of tone. Stimulants, spices, condiments, etc., will now be resorted to. These failing after a short time to excite the gastric glands to greater action, and still the quantity and quality of food is presented to that organ for disposal, it takes up a very important and effective means, namely, vomiting. This has given relief to many an overburdened stomach by emptying it of its load, thus preventing the development of further destructive changes within its domain, which cause irritation and permanently diseased conditions. Doubtless this effort of nature to rid the system of these abnormal products, this fermented mass, has rescued many a one who scarcely deserved such merciful consideration at her hands, because a little self-control or simple obedience to well-known laws would have prevented the necessity for such relief.

Constipation

is a part of dyspepsia, either mucous or nervous, and is cured through measures effective in overcoming the primary complaint.

Viola: There is a hypothesis extant that when food is not digested it decays in the stomach, and the substances into

which it is converted are poisonous, butyric acid, for instance, a poison always present in rancid butter, and this becomes reabsorbed into the blood, poisoning it. The same when constipation admits of too long retention of fæcal matters in the colon, they are a source of blood impurity, as is demonstrated by bad taste, fetid breath, etc. The other eliminative organs doing vicarious work.

Doctor: I will not enumerate symptoms at length. It has a tendency to fix in the mind erroneous notions, not the least of which is that every symptom must have its antidote. Failing appetite indicates tonics, more food; if appetite exceeds the power of digestion, great quantities of food are eagerly consumed in the hope to overcome failure of strength and mental power. Something to take, for every new and old symptom, and as surely new causes planted. It were better to know a few *facts*.

For instance, *it is not the amount one eats* that gives power to the system, but the capacity for *using* nutritive material for developing energy. Introducing more food through the digestive organs, more nutriment matter than is bidden by the organs of *expenditure*, is a damage, even if that food were the most suited to support the powers of the vital system. As to

Treatment for Dyspepsia,

Dr. Watson says there are a few simple rules which ought always to be kept in mind in our *treatment* of dyspepsia, although we can seldom enforce them as they ought to be enforced upon our patients. What patients want, in general, is some medicine that will relieve them from their discomfort and uneasy feelings, and allow them, at the same time, to go on in the indulgence of those habits which have generated the discomfort. *And such remedies have not yet been discovered.* One great and indispensable principle in the treatment of indigestion, is that of restricting the *quantity* of food at any one time. The gastric juice is probably secreted in tolerably uniform quantities. The muscular contractions of the stomach must needs be impaired or impeded by such distention of that organ. For both these reasons the amount of food introduced

into the stomach should be kept within the limits of its capacity and powers, and these limits are transgressed if an uneasy sense of fullness is produced by the meal.

Dr. Beaumont's observations led him to the conclusion that, within certain definite limits, the supply of the gastric menstruum *was exactly regulated by the demand for it. So much aliment evoked so much gastric juice, but the amount of the latter was never greater than the measure of the requirements of the frame;* and, therefore, that whenever the food exceeded that measure, a portion of it remained undissolved, and even disturbed the due digestion of the rest.

Again, as Dr. Ambercrombie has well remarked, and as Dr. Beaumont actually saw, various articles of food are soluble in the stomach with various degrees of readiness. Therefore, when the digestion is easily liable to be impaired, it is of great importance not only to refrain from those substances which are known to be difficult of solution, but also to avoid mixing in the stomach different substances which are of different degrees of solubility. Hence, there are two reasons why it is salutary to dine off one dish: First, because we avoid the injurious admixture just adverted to; and, secondly, because we escape that appetite and desire to eat too large a quantity which is provoked by new and various flavors.

And another and very important principle, greatly insisted on by Dr. Abernethy, is that the stomach should have

Time to Perform One Task

before another is imposed upon it. He always made his patients, at least, he always strongly exhorted them, to interpose not less than six hours between one meal and another; allowing from three to five hours for the digestion of a meal, and one hour over for the stomach to rest in. Dr. Abernethy's rule seems as much founded in reason as it is justified by experience. But we preach in vain on these topics.

Julia: How beautifully adapted to the coming "to the help of the Lord" are the hygienic remedial methods. They are the natural, divinely-appointed means of bringing about a return of "unity of spirit and bond of peace" in the physical

organism, which shows that obstructions in the way of the healing power within are removed, and health, wholeness, harmony are enabled once more to pervade the whole being.

Doctor: Prominent and leading among these methods is *Remedial Motion.* Dr. Blundell says: "It looks to the inherent vital forces as the

MAINSPRING OF EVERY ACTIVE MOVEMENT

and function of the organism, and it essays alone to remove what might be almost called inorganic impediments to the free course of those forces."

Applied to the "case in question," what is the usual and almost essential condition of the digestive organs in any form of chronic ailment?

Viola: Sluggishness, which is caused by a slow and faulty demand on the part of the general system for nutriment.

Doctor: What is the natural incentive to digestion?

Julia: The supply of material necessary to support the active tissues of the body of whatever kind—brain, muscle, etc.

Doctor: Does an increased amount of food in the stomach insure added facility for using this food?

Viola: It does not.

Doctor: Where, then, is the primary fault in digestion?

Julia: In the tissues, which have so little need for support they make but limited demand.

Doctor: What does remedial motion, or massage, propose to do?

Viola: To create more demand; as obstacles which are in the way in the minute vessels will be removed, and nutritive matters may be freely conveyed through their natural channels; while the worn-out matters will be carried to their places of exit from the body, thus precluding the possibility of that decline which comes to the organism through lack of that perpetual change which in health pervades even the minutest portion.

Doctor: If the uses of food are fulfilled, what is a prime requisite in accomplishing this purpose?

Julia: That the nutritive supplies be *urged along* their course, which enables them to perform their office. The decay of unused nutritive material within the vital organism gives rise

to various forms of disease and blood-poisoning, as we have already learned, and adding to the supply of nutriment or introducing chemical obstructions, under the name of *medicines*, not only cannot take the place of changes which are brought about through motion, but are positively hurtful and destructive in their effects.

Doctor: It is pretty clear that *one reason for sluggish digestion is the lack of demand on the part of the system at large for food.* You may give *another cause* for this inertia.

Viola: It lies in the incomplete removal of "*waste*," which is removed by oxidation, deep and *unimpeded breathing;* and of "residual," "ashes," the matters forming a part of the food, not subject to the influences of digestive secretions, not changed, but doubtless performing a part in the digestive process. This residual matter is also

DEPENDENT UPON BREATHING,

for its movement along the intestines and final exclusion from the body.

Julia: I do not see how breathing can so promote the motions of the intestinal canal.

Viola: Take a deep, full breath, if you are properly dressed, this is at once apparent. You will understand how the outside, serous coverings of these tubes, the intestines, are made to glide upon each other; and this very motion inspires to the *absorption* of digested materials; and the *secretion* of fluids, which dilute the mass of food and render it capable of use by absorption, and the elevating processes following, until it becomes a part of the living organism. The vermicular motions of the intestinal tube, verging along these substances destined to be expelled, are promoted by the same *respiratory acts.*

Doctor: The constant need for these changes at all times, awake or asleep, manifestly precludes the idea of perfect digestion without them. "And since motion of the organs is a necessary part of their functions, no restoration of digestive power is possible that does not also include the restoration of this mechanical or muscular property." From what has been learned, *what would you infer to be the most rational, natural, and philosophical resource of one who is a dyspeptic*, no matter what the particular symptoms may be?

Viola: Surely it would be the cultivation of the *power to breathe;* and this is found in the strength and use regained of all those muscles concerned in respiration, which does not fail to apply to the abdominal as well as chest muscles. Animals are cited by our author as having a mechanical structure which necessitates the communication to the digestive organs of a great amount of motion by every movement of the body.

Doctor: Human beings have need of

JUST AS MUCH MOTION

as animals, but how limited is the supply in most cases. The most efficient means for supplying the needs by applied power, where cultivation of the natural resources has been suppressed, or entirely discouraged, until chronic weakness pervades the system, is found in *Mechanical Massage*, but an approach to this may be made through a few well-practiced movements, which may be adapted to individual requirements:

1. If quite weak, sit on a stool, but if able, stand, with hands on hips. Bend the body slowly forward, and as far back as possible. Count, naming a number distinctly, aloud, with each motion—from five to ten. Rest a moment.

2. Same position, bend from side to side. Counting as before.

3. After resting, bend obliquely forward to the right—very slowly—count.

4. Bend obliquely to the left—slowly—count. *Rest.*

5. Hands clasped over the head, *twist* the trunk, from right to left, and from left to right—slowly—count. Rest.

6. Lie on the floor, or a low-headed couch, on the back, and knead the abdomen, with the spread hand, and fists—knead firmly—make pressure from both sides. This may be continued a few moments, owing to its agreeability; if there is tenderness, it may be discontinued the sooner.

7. Rising, hands dropping at the sides, bend slowly forward. Rise slowly toward the perpendicular position, *inhaling* through the nostrils, if possible, at the same time extending the arms, and bringing them at last perpendicular to the shoulder. Hold breath, and pat the chest with open hands, while holding,

and slowly exhaling. Lie down and rest, when repeat this once or twice. Follow with a cold stomach and liver rub, and lively patting of the bottoms of the feet. Ready now for a drink of hot water, and an hour's *rest.*

All the requirements of hygienic living have full play in these cases of bad digestion. There must be sunlight, pure air, simple food, rest, exercise, proper dress, and every suitable influence brought to bear. *Absolute rest for the stomach*, in some cases, will advance the patient marvelously. Where mechanical massage is available, it is readily understood that a *call* for food is made so early in the treatment, that not so rigid enforcement of abstemiousness in diet is necessary, for the system can *use* more. One kind of grain preparation and one of fruit at a meal, with thorough mastication, will soon insure a comfortable degree of liberation from the torments of indigestion. Do not watch the effect of this or that food; select what is best; eat it in the best manner you can, and go your way. You have nothing more to do with it. The liver may be fomented about three or four times a week, and full enemas twice a week may be taken. Sleep may be invited and allowed to stay. Quiet of mind and body, at the same time abundant exercise of such as can be made available. Actual work of a muscular sort, not little, fretting, nervous, wearing work. House-work, to the degree of strength, garden work, and the like have the germs of cure in them. *Uses performed* for others, with a hearty enthusiasm, lift up the organic forces, and behold! where is the "occupation" of the physician? "Gone!" "Speed," then, "the parting guest."

Neuralgia.

"What darts with quick electric pain,
Like lightning flash, then flies again,
Rasping one's nerves with might and main?
Neuralgia.

"What keeps the vital powers at strife,
Muscle and nerve with torture rife,
Till one is well-nigh tired of life?
Neuralgia.

"O pain of pains! O ache of aches!
That every nerve with anguish shakes,
And life one bitter Bochim makes.
Neuralgia.

"What woes upon thy presence hang!
Thy stinging, tearing, rasping pang
Is sharper than a serpent's fang.
Neuralgia.

"Great king of aches, without a truce!
Thou hydra-headed pain let loose!
Of all earth's ills the extracted juice!
Neuralgia.

"Pandora's box of woes compressed,
And every pain a viper's nest,
Writhing and stinging without rest.
Neuralgia.

"In vain we try thy pain to touch,
With poultice, liniments and "such,"
Drafts, pills, and powders, O how much!
Neuralgia.

"In vain we follow written rules,
And drugs of every name (O fools!),
Of all the Pathies and the schools.
Neuralgia.

"O Protean nerve-ache! Tic-douloureux!
A *dolorous* pain thou art, 'tis true,
Defying drugs and doctors, too.
Neuralgia

"What *shall* I call thee? Words all fail
To coin a name that will avail,
For all thy wealth of woe and wail.
Neuralgia.

"In vain my pen were dipped in gall,
With all the furies at my call,
Thou can'st *be felt*, and that *is all.*
Neuralgia."

[One Who Knows.]

Doctor: Persons long afflicted with neuralgia do not die of it, because the disorder is not concentered in vital parts. This continued or frequent occurrence of the same irritation in a nerve makes it easier for that nerve to become affected by internal conditions, and a very trifling addition to the *nervous dyspepsia*, which expresses the state of the stomach, will induce an outbreak.

Julia: The nutrition of the body being disturbed, causing neuralgia, whatever agent is operative in this disturbance would be apt to bring it on; and from dear experience I know that mental disturbance of any kind will do it as readily as bad diet or changes in the atmosphere, prolific as these sources are.

Doctor: The skin nutrition lacks power, and, consequently, changes of weather cannot be well resisted by it, for the internal state of the body underlies this defect in the skin.

There is a neuralgic habit established in some women, generally those whose sensitive and deep feelings tax the powers of the internal viscera, by calling to the brain and spinal cord the nerve force which should have been expended in other parts, resulting in weakness and irritation of the stomach, which, met by stimulants, increases the evil. Some women are tormented with perpetual nervous headache in consequence of stomach irritation, to which is added *that of the uterus;* but whatever the expression of pain, the *fact that disorder of the digestive centers is underneath the whole of it* is an important point in the practical application of curative means.

Treatment.

Under home treatment we must look upon the subject as one suffering from nervous dyspepsia. During paroxysms, applications of heat and moisture will effectually relieve the pain, though sometimes there is not much apparent exemption from the tortures inflicted by such a condition of nerves and viscera.

Neuralgic women must, of all women, be extremely regardful of the proper adjustments of clothing. Flannel and silk, the latter worn next the skin, must be worn all the year; the feet shod as becomes one who means to gain some degree of vigor and retain it; all excitements which call out nervous action avoided, cultivate quietude, suppress all tumultuous thoughts and sensations, give them no quarter; develop the power *within* in every way; open the doors of admission to helpful influences.

Sciatica.

Doctor: This is one form of nerve-pain or neuralgia, which depends upon the viscera for existence and support, and is cured through cure of visceral disorder. It is a transference of remedial effort from a vital part to one more remote and less vital; and, while local applications are not only admissible but useful, they do not supersede the necessity for restoration of the whole system. Pain is of such intensity, I have frequently known

the sufferer to wish earnestly for death, and to all appearances, the most approved and persistently applied medication, with the whole array of stimulants, irritants, and opiates, could not even approach relief. Temporary palliation is about the highest aim of medical art in these cases, and that is not by any means assured. Revulsion, getting up activity at some part to lessen congestion and pain in some other, is what blisters, ointments, plasters, liniments, cuppings, leechings, bleedings, blisterings, setons, cauterizings, etc., are expected to do, and the principle is correct. It is capable of being applied to bringing about *physiological*, or *health-inducing*, not pathological, disease-producing, results.

Dr. Geo. H. Taylor says: "Doubtless the good effects of many internal remedies, as cathartics, stimulants, alteratives, etc., may be attributed to the same principle."

Doctor: This impression made, which we interpret as the recognition of the vital instincts, inducing vital action against an enemy to its domain, may take place in some tissue remote from the irritated nerve-centers, and so action is transferred, calling nutritive supply *from* these excited centers, and relieving pain. But the "disease is mitigated, not by *physiological*, but *pathological* impression."

Julia: And such an impression must necessarily be only transient, for it gets up a war in one place to relieve the struggle going on elsewhere.

Viola: "If we could fully *know* the causes of nervous maladies, we might often trace their origin to remedies whose

Immediate Consequence

may be relief and seeming benefit, but whose ultimate effect on nerve-centers is disastrous."

Doctor: There are two kinds of revulsion: 1st. Blood is invited or induced to flow to some region of the body, as the skin and extremities, thus *reducing the quantity* which some suffering part contains. This is called *regional revulsion.* 2d. The blood thus called from "center to circumference," from an internal to a remote or external part, contains materials which are used by the parts to which it is called; and so, *nutrition* is changed

from the support of diseased, abnormal, pathological action, to physiological action. This is "*physiological revulsion.*" How is *regional revulsion* secured?

Viola: Through *vibrations.* A limited portion of the body only receives the applications.

The effect is to arouse its nerves, and excite nutritive activities. Physiological revulsion follows; the blood flows to the region designated, it feeds the tissues, distends the vessels; the parts increase in size, and get color and firmness, where they were before deadly pale and flabby.

Doctor: How is the blood in parts near, and in even remote regions of the body, affected?

Julia: It is diminished in them in proportion.

Doctor: What is the effect of

"NEW AND VIGOROUS ACTION"

established in any chosen part? Take our sciatica patient's dwindling left leg for an instance.

Julia: Its relations to the remainder of the body are changed as regards the distribution of nervous power, as well as of the blood. Vibratory motion calls the blood from the *congested and oppressed nerve-centers;* thus the normal power of the nerve-centers are restored, being relieved from the excess of blood through the means employed to reduce their irritation. The *muscles* are nourished, because more blood is supplied to them, and the unbalance between *nerve nutrition* and *muscle nutrition* is removed; congestion and pain at the same time are deprived of support in this changed order of things.

Doctor: Upon what is nervous action dependent?

Viola: On blood supply.

Doctor: How may nervous action be increased or diminished in any region or organ?

Julia: By increasing or diminishing the activity of nerve nutrition, which can be completely done by vibratory motion.

Doctor: Is the *physiological revulsion* produced by vibration, distinct from any effect produced by other means?

Julia: It is; it affects *bodily functions* as well as regions.

All the Disabled Functions

of the head, chest, digestive organs, pelvis, etc., "find relief from the derivative use of vibratory action."

Doctor: In what region is the effect especially satisfactory?

Viola: Where there is disease of the cerebro-spinal centers, the brain and spinal cord.

Doctor: Why do these centers of nervous power, when suffering from congestion, find direct and certain relief in vibratory motion applied revulsively?

Julia: "Because of the excitement produced in the skin and extremities, and the transfer of blood to them."

Doctor: How can this effect be made *permanent?*

Viola: "By sufficient repetition of the operations at suitable intervals."

Doctor: Are there, as in the case of other revulsives, any *diseased conditions induced* by these means?

Julia: Decidedly not; their effect is *purely physiological*, health-inducing.

Doctor: Home treatment for sciatica must necessarily be tedious, as the indications of these cases are scarcely met in means less prompt and efficient than what mechanical vibration or massage affords. But better, far better than to take drugs, the patient may take up a line of treatment for dyspepsia, and during paroxysms of pain, always meet them with *heat and moisture*, no matter where the pain is located. Diet in this case is a strong, strong point. Sciatica is readily curable.

Paralysis.

Doctor: The symptoms of paralysis are too well known to need description; there is no mistaking the disease, and none stands so eminently defiant of cure, if you judge by results obtained from popular remedies. Surely benefit ought to be derived from medical endeavor; if it is not, there is a mistake somewhere; and let us try to find it. What is the course generally pursued in these cases?

Viola: Effects are dealt with and experimented on, instead of strengthening and aiding the expression of vital power in

every tissue, and bringing up the blood-making process to its summit of completeness, as upon this process all power of the vital organism so much depends.

Doctor: The trouble is, perhaps, less in what the remedies employed are intended to accomplish, than in the wisdom of their selection; they should be of such a nature as will admit of very persistent and prolonged use, because the nature of this affection demands nothing less. If we employ curative (?) measures which would make a *well* person sick, how can prolonged use of them be other than very harmful in the case of a *sick* person.

Nearly every case of paralysis is helped by remedial motion, and each one illustrates the value of other medical resources compared with motion remedially employed. While these curative methods are so entirely suitable, and abundantly able to meet the demands for imparting energy to the nutritive forces, and securing thorough and constant *revulsion* from the spinal centers, it is encouraging to the invalid to feel that perseverance in the application of these methods continually affords hope of reward, because they are in strict accord with the laws of nature, and do no violence to any part of her domain.

CHAPTER XV.

DRESS.

Doctor: The clear advancing dawn of self-possessed, developed, powerful womanhood, lights up the brightening sky, and promises a day so free, resplendent, glorious, that with haste we seek to adjust ourselves for work therein; for, like the illimitable sun-ray, "it gives beauty, reveals beauty, and is itself most beautiful. It is also the analyzer, the truth-teller, and the exposer of shams; for it shows things as they are. . . . Like all other fine forces, its movement is wonderfully soft, and yet penetrating and powerful."

The demands of this New Age, the uses to be performed, the battles to be fought, the victories to be won, are well-nigh overwhelming, but in the calm, majestic, *purposeful* life, all inharmony and discord are swallowed up, strong in the assurance and promise, "As thy day is, so shall thy strength be," woman trustingly reaches out her hand to Truth, and follows her guidance through all the newly-opened paths toward the greater life.

Nothing can harm; the lesser life is drawn towards the greater; human souls are drawn together; they cohere because of interior fitness and unfoldment. The gradual uplifting of humanity through growth and progress, is the actualization of of the divine *manifest* in the human. It is but the orderly "development of the human nature into the character of its spiritual attributes."

And what is the high design of Truth and Spirituality? *Freedom.* "The Truth shall make you free." "Where the spirit of the Lord is, there is liberty." The organized forces of Truth, Truth in knowledge, industry, systems, customs, methods, practice, social, literary and religious culture—in a word, *Truth in the life*—is the fulfillment of the Divine intent.

Julia: I cannot see what Dress has to do with Truth. What is it but to find out what is fashionable, and then make yourself look as pretty and stylish as your means will permit? I do not think all women can dress equally well, some are compelled to wear cheaper clothes than others, as their circumstances are less affluent; but I think it a duty for every one to look as fashionably dressed as possible; it goes a great way with every one; and not less at this time when woman's capacity for use in the many departments of life seems so well demonstrated.

Doctor: The *Truth of Dress* should indeed be taught and lived by woman, just as much as any other form of Truth. The character of a person's dress is so closely allied to the person, that the two are about inseparable. The physical

would prove a barrier to woman's ever becoming successful as an active worker in the fields now open to her, and *emancipation* is the watchword of the hour.

A new and radical departure from the venerable habits of blinding the eyes, and following whatever caprice fashion may impose, is one of the indications that the reform movements, which enlist heart, brain, and hand of the choicest among womankind, have in them an element which insures growth and stability.

The outer is ever the exponent and expression—the ultimate—of the inner; and that soft, gentle, but powerful stirring of the spirit within woman will as surely effect the freedom of prison-bound bodies through the expansion of mental and spiritual *atoms*, permit me to say, as will that little rootlet of the oak, by steady growth, at last rend the huge rock asunder! I have worked thirty years in the pioneer field, among the criers in the wilderness, and very faintly at first did the sound of our doctrines strike the ear; but gradually and forcibly the waves have gathered volume of purpose and voice, until now you hear *a roar* for release from tyrannical fashions. What else does this wave of enthusiastic interest in the dress question mean? Over all our land and foreign countries "the crack of

doom" is come to every article of woman's dress not in accord with the expansion of her internal nature. Woe from the heart is proclaimed against the steel and whalebone instruments of torture which gird the body with the grasp of a boa-constrictor; against the bands and heavy skirts; the clipping of scissors is heard all the day through, for woe, and that eternal, is pronounced upon every identical article of woman's clothing that durst impede her freedom of motion, and her physical, moral, and spiritual breath.

The slow but sure expansion of "atoms" has, in their development, pushed against the stays and bands and prison clothes with vigorous demand for the "right of way." Some one said of woman: "She is in a frenzy to reform the world. Very well, let her try her hand on her own dress first. When she has that a little more in accordance with hygienic principles, it will be time to look farther."

Viola: Devolution, Evolution, Revolution! Three words scarcely at home in a fashion magazine, yet they may apply to the workings of the "still, small voice," so internal, yet pushing forward, overcoming resistance, and powerful to work change where change seemed so improbable. Had not the force been an internal one, it seems to me that no amount of external argument would have influence to work such a revolution as we know is widely inaugurated in the monarchy of fashion.

Doctor: Roomy dress, and

FREE-BREATHING WOMEN,

are the demands of this incoming day. If we are forms receptive of life, and have it in our power, through the agency of free-will, to receive "good measure" or to limit spiritual influx, is it not true as to the body that, as capacity to inspire, to inhale the life-sustaining atmosphere, is great or small, we are enabled to become receptive of the higher influences? "He came unto His own, and His own received him not." The Christ comes to-day to woman, the soul is touched, and new life, new development, even to the ultimate, follow. And behold! Woman free, untrammeled! She has entered the Path

of Truth in Dress. It is broad and easy, for, having entered, she is free. Perhaps it is hard to reach it; a strait and narrow way, straitened by notion, custom, love of approbation, unbearableness of ridicule, and many, many impediments. "But her ways are ways of pleasantness, and all her paths are peace." How joyfully the glad tidings of new clothes, fitted to a divinely-gifted, natural body are proclaimed! Henceforth the freed woman will dare to *dress* as well as *live* by the standard of hygiene. No more instruments of torture! No more ill-health! Successful rebellion against this tyranny, on the part of foremost women, will aid multitudes of their unhappy sisters, who are still condemned to heavy weights about the hips, contracted chest space, and flaccid muscles.

Julia: I am utterly discouraged as I think of what efforts one must put forth in order to be well dressed and stylish and beautiful. And then how disappointing to find one's self unsuccessful at last! I must belong to the army of the unfreed.

A friend wrote two years ago of her experience: "Have I not followed the

Spirit of Beauty

with eager entreaty that she bless me with her presence? Have I not covered her altars with painful oblations? Surely I have studied books of the toilet without number? I have concocted more messes for the improvement of my complexion than a druggist's laboratory ever evolved. I have greased and anointed, whitened, reddened, softened, purified, and cleansed with a pertinacity of attempt which, if given to a better cause, would have furnished me with noble eminence among the workers of the world. Have I not crushed my waist with the inexorable clasp of corsets to gain a figure that a broad hand might inclose? Have I not suffered untold agonies of stifled breath and aching ribs that 'fairy and sylph' might be the guerdon of my success?

"Ah, yes! No one can say that I have not worshiped faithfully at Beauty's shrine! For years I have wedged, with quivering nerve and shrinking tendon, a No. 4 foot into a No. 2 gaiter. Winter after winter I have chilled to the marrow in silk stockings, that I might crowd my foot into a circum-

ference too small for woolen ones. Many a day have I limped painfully over the pavements, scarcely able to convince myself that my feet were not solid concretions rather than animal tissues. Many a time have I been forced to retire from social assemblies to a deserted dressing-room to remove my inquisitorial torturers, and give the stagnant blood in my feet a chance to move. Did not disgusting corns bear testimony to my faithful adoration of beauty? Is not that ingrowing nail a continual sacrifice of comfort? For years I have not known a day free from excruciating headaches. It seems as if an invisible imp dwells in every individual hair I wear, to tug and tear with preternatural malignity. The more I pile on, the worse it grows. Yet, with all this battling against the epicurianism of ease, I fail in my object most miserably. For though my waist has shrunk to the measurement of sixteen inches, the perverse fates have drawn my shoulders out of the graceful curves that were once my pride, till they describe an abominable acute angle. Day by day my elbows grow crooked and shrewish, more and more like interrogation points to my perpetual question, 'What shall I do to be beautiful?' My eyes are heavy and often embroidered along their lids with crimson tracery. My golden locks have become thin, and I can hardly cover my coils, 'mice' and 'rats,' with a natural growth. But, alas! the most soul-harrowing misfortune of all is my complexion. Bilious spots appear upon my forehead with the persistency of profusion, which no Oriental Cream or Bloom of Youth can conceal. Angry eruptions break out across my chin and around my nose. Lifeless flakes of skin stand continually upon my lips, as if the curse of leprosy made me forever unclean. I am as thin as one of Ossian's ghosts. In vain I cram myself with all the dainties of mother's bountiful table; the more I eat the more attenuated I become, till it seems as if my favorite victuals had entered into an alliance to defraud me of sustentation. So now, at twenty-two, I mourn over a pyramid of faded hopes, and ruefully behold every charm with which nature once endowed me blighted as by a simoon. Oh, tell me what to do that I may gain that rare beauty of feature which comes of a perfect trinity of powers—body, mind, and soul. Tell me what to do, and I will do it."

Viola: Here is the sequel. She made up her mind to discard all unhealthful substitutes, and to strive with faithful firmness for the beautiful reality. The enemy did not give her up willingly, for she had lassitude, weariness, headaches, side-aches, and "all-gone" sensations at frequent intervals for a long time. Please read what she now writes: "But I have given two years to the trial, and those odious moth patches have grown small by degrees and beautifully less; a pale, tender rose is beginning to bud upon each cheek, while the beauty of the lily opens each day to a fresh revelation upon brow and chin. My waist is twenty-two inches in span, with the rapture of promise that the day will not be long delayed when it shall have gained the coveted twenty-four. My elbows are pickets no longer, but with rounded curves that look as if on small provocation they might dimple. My diet is simple, my stomach self-supporting, and my heart is light. It was only yesterday Brother George said to Auntie: 'I'd like to know what has ever come over our Nan; she's as pretty as a pink. But wasn't she a guy, though, about two years ago, when her waist was not bigger than the snout of a vinegar jug, and her complexion like a petrified lime? I used to be glad I wasn't one of those Johnny-jump-ups who used to come here and praise her fairy grace! Fairy fiddlesticks! She has gone back on those popinjays now, though.'

"And I am reminded of what the doctor, my betrothed, said to me the evening before. 'I always hoped that

GOD WOULD GIVE ME A WIFE,

large-brained and pure-hearted, with shoulders broad enough and waist large enough to bless her with affluent, radiant health. I was always firm in the conviction that no wide range of mental powers, no generous capabilities for grand, intellectual, moral, and physical development could accompany a curbed and cheated form. When I first saw you, dear, I looked with delight upon your superb figure, and now I thank God that He has given me, in you, an actualization of my life's ideal."

Doctor: And I say, thank God, for the enlightenment of this day, for the stirring of conscience and awakening to the

effects of the evils of dress, which are so destructive of strength, health, and life. It is, I believe, correctly estimated that about four-fifths of our American women are subjects of more or less uterine derangement, and no one can deny that the greater part of these distressing maladies is dependent on the prevalent style of dress for existence and perpetuation. Think of the horrible tortures endured by the subject of pelvic deformities, displacements and their attendant congestions, morbid growths, ulcerations, etc. If the facts and details of these protracted agonies could be presented to the understanding of men, there would be such an uprising over all our land as was never incited by any political question. They would see their mothers, wives, and daughters being led unconsciously to a fate more deplorable than that imposed upon the victims of the cruel inquisition, and all that is manly in man would dash forward to the rescue. What a snapping of corset steels, cutting asunder of bands, tearing out of heavy skirt-breadths! What bonfires of bustles, and tight, high-heeled shoes, there would be! And there would arise from this scene of "carnage," this wise revolution, a race of *free women.*

> "If she be small, slight-natured, miserable,
> How shall men grow?"

Apropos, Matthew Henry has a very pretty conceit. He says: "Woman was made out of a rib taken out of the side of Adam; not made out of his head to top him, nor out of his feet to be trampled on by him, but out of his side to be equal with him, from under his arm to be protected, and near his heart to be beloved." And how can man understand woman's nature and functions when his perceptions spring from affections that are perverted in a degree by her vanity? From these false perceptions man has regarded woman as inferior to himself, and has ruled over and oppressed her. Is it possible for woman to be equal with man when her physical form is distorted? The effect is the same whether ignorance, custom, or willfulness occasioned it. What man would endure the discomfort arising from such external restrictions? "Under his arm to be protected"—from *external* injuries; he cannot protect her from self-inflicted ones, except as he *comprehends* and *condemns* the habits which effect such dire results. "Near to his heart to be

beloved;" but weakness and disability are not lovable qualities, and inspire feelings of pity, forbearance, and tolerance. "The reason firm, the temperate will," which can love and be beloved, dwell only in bodies free from deformity, well nourished, fed with pure food and rightly, lightly, yea, beautifully clothed.

As the consequence of bringing herself into orderly life, woman's perceptions of her own duties are made clearer, and her firmness and strength exert a regenerative power in helping man to perceive the distorted motives which cause evil actions and self-indulgences hurtful to soul and body, and thus aids him in their subjection. A truer type of womanhood necessitates

A Nobler Type of Manhood.

Viola: Here is a man whose enlightenment on this subject leads him to take up sword and axe in the work of exterminating this evil of tight-dressing. Doctor John Ellis, in his "Avoidable Causes of Disease," says: "That this dreadful practice has done more, within the last century, than war, pestilence, and famine toward the physical deterioration of civilized man, I verily believe. More than this, I believe it is doing more injury to our race to-day than intemperance in all its horrid forms. . . . It does seem to me that if the women of our land could only see the terrible consequences which follow this practice, not only upon themselves, but also to the children with whom they may yet be blessed, that if their hearts are not made of adamant, they would relent and never permit a tight dress to approach their persons again."

Julia: My mother is an active member of the W. C. T. U., and also president of several church societies, and she gets quite indignant that Dr. Ellis compares this habit of tight-dressing with the drunkard's whiskey thirst. He says: "It grows upon one and soon becomes a necessity, and must be steadily increased." I think he is too radical, and does harm in making such strong assertions, which, of course, cannot be sustained. It offends people to be told such things.

Doctor: Let us see what right there is for such a statement. What is one of the uses of the muscles of the body?

Julia: To sustain it erect, and to give support to internal organs.

Doctor: If you apply tight dress to these muscles, will it not restrict their action? And what is the result?

Julia: Of course; and then, in accordance with a law of the muscular system, when they are not *used* they grow small and feeble. (*Aside.* But what has that to do with whisky?)

Doctor: Suppose you add whalebones and steel to the tight garment.

Julia: Oh, I see; these would be only more effectual in destroying the action of the muscles. (I do not see the whisky thrust yet.)

Doctor: What must be the result of continued tight-dressing?

Julia: Very naturally the unused muscles would become more and more enfeebled. Oh, I now see the stimulating point. If the natural supports are delicate, one feels the necessity for constantly increasing the pressure in order to sustain the body erect. I wonder if it is for this reason we never feel that our dresses are too tight.

Viola: Does the rum-drinker ever feel that he drinks too much? No more does the tight-dresser feel that she exceeds the bounds of safety, even to the point of destroying life, for the compression only gives proper support to the weak muscles.

Doctor: Suppose this force were applied directly, suddenly; could the body endure such distortion as we see all about us?

Viola: Oh, no. "It is by slight but constant compression that a natural chest and waist can be brought into such shape, for life would be destroyed by the violence we should do to the internal organs."

In the little-footed Chinese woman is an illustration. The development of the feet is prevented by gently bandaging and the use of well-fitted shoes constantly worn. Direct force is not applied, for it would cause the mortification and death of the feet.

Julia: Is this true?

"The Greatest Possible Distortion

of the human chest and waist may be caused without ever using a particle of force, simply by pinning or hooking, or even buttoning, the garments around the body; and thousands are thus

destroying themselves without even suspecting the cause of their failing health." How *can* this be?

Doctor: We will inquire of physiology. How much does the chest above the lower ribs expand during inhalation?

Julia: About one inch in its circumference.

Doctor: Expel the air from the lungs, and then simply pin, or button, or lace, or hook the garment snugly about the chest without using any force, what will result when the breath is drawn in?

Julia: Why, the chest cannot expand into about one inch as much as before the dress was fastened. I know from experience that a feeling of tightness will be felt for a time, but after a while the breathing becomes good enough, only when there is active exertion.

Viola: Further, we learn that the air is not all expelled from the cells after exhalation, but a large quantity remains. If the chest is prevented from expanding, owing to tight dresses, I suppose the lungs have to do the best they can, and expel a portion of the air which is usually left after exhalation, so the cells will continue to act; but less air is received and cell capacity is diminished. This is very convenient for the one who is training toward the coveted slender waist, for by the time a new dress is to be made, it can be at least an inch smaller if it is fastened when the air is expelled from the lungs, and no force be required either. So, step by step, the chest and waist may be brought into the contracted form desired. The mischief can be accomplished more rapidly by the aid of laces tightened daily.

Julia: And now it is plain that we are not conscious of prevaricating when we declare that our dresses are not tight. I have never seen women more surprised than when they came to you for consultation and you accused them of tight-dressing. Not one realized it, and, I doubt not, many thought you unreasonable, until they learned the truth from patient instruction. What a look of amazement came over the face of that lovely Miss J— the other morning, when you asked her to draw in a full breath without heaving up the shoulders. You might as well have demanded of her any other impossible feat.

Viola: And why? The chest expands freely in every direction in healthy, normal respiration, but especially so in the central and lower portions. There must be special provision made for freedom of motion around the waist. The lower ribs terminate in cartilages, elastic, gristly structures, which connect the ends of the ribs with the breast-bone. The cartilage connecting the upper rib with the sternum is less than an inch long. As we descend from rib to rib this structure is found to grow longer, until those from the lower ribs are several inches long. The floating ribs are not thus connected with the breast-bone.

Doctor: You readily see why we feel better in a tight-fitting dress than in a loose one; if we have been in the habit of impeding the natural action of the muscles by tight clothing, we need the support of whalebone and close garments, and feel the loss when they are removed,

And All-Goneness,

very like that experienced by the dram-drinker missing his accustomed "toddy."

Julia: Dr. Ellis said of the consequences that followed this habit of tight-dressing: "If we judge as to the degree of the evil when this practice is ignorantly indulged in, or as a sin when it is knowingly practiced, by the physical consequences which follow to our race, it is certainly one of the most deadly evils and sins in existence; compared with it, intemperance sinks into insignificance. It may be thought that simply compressing the waist is a very simple act and no great evil; but when it is done with a knowledge that it will cause disease and premature death, it becomes one of fearful character, it becomes self-murder."

Doctor: Why is it that such fearful consequences follow this habit? What does physiology say?

Viola: "The lungs and heart fill the entire cavity of the chest, and compression, we have seen, lessens the capacity of the lungs to receive air, which is essential to life and health; the changes which should take place in the blood in its passages through the lungs are imperfectly effected. If the blood

is not changed in the lungs it ceases to be circulated in the vessels; if it is only partially purified in the lungs, it is imperfectly circulated, and the extremities become cold. Dark, impure blood, instead of scarlet, life-giving blood, flows to the delicate structures of the brain and spinal cord, and that, with the obstruction of the circulation, gives headache, spinal irritation, neuralgia, and the protean forms of nervous diseases. The liver, stomach, and spleen lie immediately beneath the ribs, and they are crowded and pushed out of place, and cannot perform their functions well.

Julia: No wonder almost every woman has tenderness at the pit of the stomach, and all sorts of weak stomachs and torpid livers, when they are jammed into the very narrowest space assigned them by the corset and skirt band. The kidneys are injured, too, from this compression; and what internal organ is not?

Doctor: The bowels are crowded down upon the bladder and uterus, and, as a consequence, displacements, anteversion, retroversion, etc., with attendant congestions and ulcerations, and all the family of uterine affections follow. Dr. Abernethy, of London, had a young lady brought to him by her mother for treatment. He took out his knife and ran it under her belt, instantly severing it, exclaiming: "Why, madam, don't you know that there are upwards of thirty yards of—— [what are more elegantly termed bowels] squeezed under that girdler. Go home; give nature fair play, and you'll have no need of a prescription."

Viola: And even some physicians call these the "natural weaknesses of woman." Mrs. Stanton says: "I do hope all physicians will stop talking of the *natural* weaknesses and disabilities of women; there is no such thing; they are all *artificial*—the result, in all cases, of violated law.

A Well-organized Woman,

who understands and obeys physical and moral law, may enjoy a life of as uninterrupted health and happiness as the man by her side. You might as well call tobacco-chewing, spittoons, delirium tremens, keno banks and panel-houses the natural

weaknesses and disabilities of man, as to attribute all the long train of evils which flow from the dress and sedentary habits of our girls to the natural weaknesses and disabilities of woman.

Julia: Howard Glyndon says: "I do declare that I think it would be better to die and get out of the torment at once, than to have to rise every morning, for some forty or fifty years, and box one's body up in a sort of compressive armor, hang weights to one's hips, and more weights upon one's head, which last are supported by the roots of the hair, put one's feet into shoes a number too small, and not of the right shape, and with heels like stilts; and then set about doing the whole duty of woman, with a cheerful face and a spry air, for from fifteen to seventeen mortal hours out of the twenty-four! That there are so many women that are not frightened into a decline at such a prospect, and that they should bravely undertake to do it, nay, more, that they even dream that under such disadvantages they can work side by side with unshackled man, and that they die in trying to do it, certainly says much for their courage."

Doctor: "*How to be Well*" says: "The *uses* of dress are not thought of when our garments are modeled; and the *beauty* of dress is in great degree most certainly obscured, if not destroyed. When I looked at woman's apparel from inmost to outermost, I am reminded of the words of Shakspeare:

> "'The gown? why, ay! Come, let us see 't.
> O, mercy! what masking stuff is here?
> What's this?—What—up and down carved like an apple-tart?
> Here's snip and snip, and cut and slish and slash—
> Why, what o' the devil's name call'st thou this?'"

Viola: To begin at the beginning, and observe the article put on first in the morning, we find the *chemise* even at this day is still in existence. It is a garment supplying various degrees of fullness about the waist, offering no protection to neck, shoulders, chest, arms, or lower limbs, yet is thought to be indispensable to its charmed devotees, receiving their unswerving loyalty, and demanding an amount of energy and talent in its construction and ornamentation which, if turned into channels more in accord with woman's advanced needs, would produce such perfection in the mechanism of under-dress, that the *chemise* would be universally banished from the wardrobe at once.

Doctor: I have witnessed the most ludicrous affection for this garment by some invalid ladies who were in such conditions as to render change in the mode of dress an absolute essential to their recovery. When prevailed upon to adopt the very physiological under-dress called the "union suit," they would still cling to the chemise, wearing it first under the "suit,' then over it, all the time subjecting themselves to much inconvenience, and wondering how next to wear the garment, so it need not be entirely discarded.

Frequently I prescribe proper dress for my patients, and allow them to pass unmolested through this painful process of shedding, and it affords much amusement to them afterward, when the charmed spell of the *chemise* is broken.

Julia: The drawers are supported on the hips and reach about to the knees, giving most warmth to the abdominal region and the back. And skirts, first the flannel under-skirt, short, buttoned around the waist, and, like the over-skirt, which is longer and heavier, gives or produces most warmth just where it is least needed, and where there is probably already too much blood, invites more, robbing the extremities, which have very scant protection. The corset, with its two thicknesses of stout material, corded, and boned, and steeled, and *always worn loose*, if the wearer is to be credited with capacity for knowing what she says about it, is no protection whatever to unprotected regions, the limbs, both upper and lower, the neck and chest; but is an added burden to the already overburdened and weakened central region.

Doctor: There is not one good word to be said for the corset. If ever there were a case of total depravity this is the prominent example. When I was crowned with fewer years than now, corset-wearing was thought to be essential to a ladylike form; hence, at the proper age, I was put under training. I could not bear the discipline. Corset was invariably removed after a few ineffectual pants for breath and freedom.

About this time I was sent away from home to school, my trunk carefully packed by loving hands, and the corset not forgotten. In those days the corset was a marvel of handiwork, and triumph of skill in use of the needle. It was enjoined upon me to "turn over a new leaf," to be good and wear my corset.

I tried. But almost involuntarily my fingers would find the corset string, unloose it, and not unfrequently I walked into the recitation room with that long, white string following me, like the "trail of the serpent." The disgrace of it did not appall, nor did the prediction that my form would be hideous. Native instinct, if nothing higher, triumphed over the false but sincere notions of those who had me in charge, and I was permitted to go free. The corsets were abandoned, cut up into wash-rags, and distributed among my school friends. We learned that corsets are of no use, except for wash-rags, and of very inferior value for even that purpose.

Julia: Let me read you part of this letter from an Englishman; corsets had the advantage in this case, surely:

"Sitting in church the other Sunday, a lady came and sat directly before me. It was impossible not to see her, too difficult not to notice her appearance. She was tall, thin, and very pale, and had the smallest waist for her height I ever saw, connecting the upper and lower portions of a living woman. How could one help thinking of her anatomy? Where had she stowed her stomach? whereabouts lay her liver? into what corner had she packed her spleen? what could she do with her diaphragm, under a broad belt that cut her in two like a wasp or an hour-glass? A glance at her pale, pretty face showed that her heart was having a hard time of it in such cramped quarters, while no proper aeration of the blood in such crowded lungs was possible. There was but one comfort. No man of sense would marry her, and the consequences of her folly will not be punished in her posterity. Would it not be wise to appoint some proper officer to inspect the waists of women who commit slow suicide by this hideous folly of tight-lacing?"

Viola: I would ask, "Is there no other way, besides these 'hideous practices,' how we may come to death, and mix with our connatural dust?"

Julia: I'd answer, yes, there is (forgive us, Milton),

"If thou well observe"
The laws of life and health, and harmony here taught,
Thou'lt live, "till many years over thy head return,
Till like ripe fruit thou drop
Into thy mother's lap, or be with ease
Gathered, not harshly pluckt, for death mature."

Viola: We now reach the "gown"—the outer dress. The skirt will be found suspended from the hips; numerous folds and gathers and plaits accumulate at the back, heating and tiring those weak "muscles that never rest." The basque or polonaise adds more weight and warmth still to the back, and the garniture of the whole dress is necessarily heavy, according to the approved style. We have seen that the weight of all the clothing, at least of the skirts, bears upon the hips and abdomen, and that about the central portion of the body, from the arm-pits to the thighs, cluster six or eight thicknesses of cloth, while the arms are left with perhaps two, and if a woven undervest is worn in winter, which happily is becoming the custom, that, with its sleeves, will make three thicknesses of covering to the arms. The legs, covered by the skirts, get very little protection from them, and the stocking gives really but one thickness to those extremities. The delicate, pinching shoe does not permit the blood to circulate in the foot, even if it ever got so far from its seat of congestion—the internal viscera—as to seek its way into those capillaries so compressed and chilled. And so we have, in our mode of dress, one of the most fruitful sources of chronic internal congestion, as well as of all those forms of displacement, and their attendant train of ills.—"*How to be Well.*"

Doctor: But proof that light is breaking over the mountain tops is furnished in the increasing readiness with which women everywhere receive and appropriate those styles which are befitting the New Age, in harmony with true beauty, use, and the mechanism and laws of the human body.

First, is the union suit, fitting body and limbs, from "top to toe," from neck to foot. As many suits, layers of suits, may be worn as are required for sufficient warmth, thus doing away with the heavy, burdensome, inadequate skirt. The idea is to get needed protection and warmth from the snugly fitting suits.

A suspending waist, well fitted as you would have the waist of your best gown, loose enough to admit of full inhalation and expansion of the lungs, and extending three to four inches below the waist-line over the hips, is a very essential article of clothing, at least during these days of transition. Flat but-

tons on the bottom of this waist will hold the little, narrow, light, next-to petticoat, and the same buttons the over-petticoat, which will also be as light as convenient. At or a trifle below the waist-line, buttons may be placed so as to hold the dress-skirt, when polonaise or basque is worn. The petticoats will not be removed from the waist until changes are required, as there is room to drop waist and petticoat entire, thus saving trouble of buttoning and unbuttoning so frequently. The neck should be cut high enough to allow ample support from shoulders, and the arm-hole very large. This is sleeveless. Fine linen duck or cotton night-gown cloth is the best material. It is made of one thickness, and admits of such garniture as taste and fancy devise. This is far preferable to the corset, and any dressmaker is capable of cutting, fitting, and making it if she is sufficiently instructed concerning the purposes of the garment.

For the pretty and useful union suits of muslin or linen, worn over the woven long ones, patterns are now to be had in various pattern stores, so it is within the ability of any and every one to be well clothed.

In winter, a pair of long leggings, worn over the stockings and allowed to come inside the shoe top, will give protection to the lower limbs far exceeding anything an extra petticoat can afford, and so very light withal. Doubtless, the practice of clothing each limb separately is a true one. Observe the rule to supply the limbs with layers of clothing equal to what the body receives, or as nearly so as possible. The stockings must be supported by shoulder suspenders, for the garter, below or just above the knee, is injurious if worn tightly enough to hold. Ventilated garters may be worn, not tightly, in addition to the shoulder support. I like this, as it divides pressure and answers the whole purpose.

For night clothing, *always* have a flannel over-gown. Cotton or linen next the skin, and this obviates the need of frequent washing of the flannel. Woven night-wear is not good. It clings too closely to the skin, and does not give it a chance for performing its breathing function so perfectly; does not let enough air to the pores during the state of rest. Night-caps are a thing of the past, but there are times when they may be

useful. Persons sensitive to temperature may permit the fresh outside air to pervade the sleeping-room if the head is protected by wearing a cap, when otherwise the air would cause discomfort.

Viola: Foot-clothing I would suppose quite an important matter of dress. It is unaccountable that delicate woman, walking on the same cold, damp earth which stout men tread, will be so unshod, that for all practical purposes there is no protection for the feet; while the man, at whose side she creeps along, mincingly, shiveringly, boldly planks down his stout boot or shoe, which perfectly insures him against damp and cold, because of its warm texture and thick sole.

Doctor: Several layers of fine material give better satisfaction than one of thick, heavy quality. Two pairs of light, soft stockings are much warmer than one pair of heavy thick ones. It is a good practice to wear one pair of fine socks under the stockings in winter. I have lately come into possession of something which promises well for women's foot-wear. It is a pair of slipper-feet, I call it, for lack of a better name. Made of fine flannel, or cotton flannel, or buckskin, the pattern exactly fits the foot. It is really a low slipper, ingeniously contrived so as to be almost seamless. This is worn over the stocking, is said not to demand a shoe larger than usual, and gives comfort and protection against cold. Many women are so "tender-footed" that heavy shoes and thick soles are not endurable, and for such this device would be extremely suitable. High heels are so universally and so justly railed against, that no one at this time is left ignorant of their damaging influence upon the misguided wearer. "Common-sense" shoes are now abundant in the market, and there is no excuse for wearing any other.

Julia: I was just thinking of what a grand office the dress reformer fills. How influential is dress, and also expressive of the inner character. The one who leads women to higher ideals and better practice in this department of life does her noble service. And there are many representatives of this order. Reform waists and underwear are quite generally found in shops, and all this the result of the much-decried dress reformer of earlier times. But, after all, I am discouraged to

see women making such wrong estimates of utility and beauty as still to allow the corset, weighty skirt, and their high-heeled shoe such favorite acceptance when so much has been taught, and even accepted with a show of belief in their unfitness. Sometimes I think it is a good deal like the sermon St. Anthony preached to the fishes:

"The sermon now ended,
Each turned and descended.
The pikes went on stealing,
The eels went on eeling;
Much delighted were they,
But preferred their old way."

CHAPTER XVI.

BREATHING.

Doctor: The health of both body and mind is more affected by good breathing than we have any idea of. To breathe well means to breathe deeply, to breathe from the abdomen. The abdominal muscles are the ones chiefly engaged in normal breathing. Their importance in this office is recognized at once when we turn from art to nature, and learn how the sleeping body breathes. Observe the little untrammeled body in the region of the breathing muscles. How different from the action which is performed by the adult, especially woman, whose breathing is confined to chest muscles, and the *upper part of that region.* So far removed from the true natural order is woman, so restricted her use of the body muscles, that even some physiologists are found to state that "woman breathes with the upper ribs; man with the lower!"

Julia: Is not that an added proof of the difference between the sexes, and that woman is the higher, because she breathes from the top of her chest?

Viola: You are meeting this practical inquiry with ridicule, a weapon which is very forceful, indeed; but *truth* is invulnerable to its most pointed shaft. Will you instruct us, doctor, in this Breathing Art?

Doctor: I will *tell you* how to breathe, so that the first food of the animated being, which you have learned to be air, may be received and appropriated to the rightful purposes of bodily nutrition, aid in cleansing the blood, removing impurities, stimulating the skin and other eliminative organs, and strengthening the respiratory and other muscles of the body. But to render the instruction available will require some effort, which it is not difficult to make when you consider the great object sought. So, free the body muscles. They have been so burdened and imposed upon, it is no wonder the power with

which nature endowed them and which was exercised in babyhood is about gone. But take courage, learn your lesson in the practical development of those parts designed to act so conspicuously in introducing that vital nourishment into the organism, that chief need, which, if unsupplied entirely, would quickly close our "earthly pilgrimage." Now, with no impediment to the widest use of the muscles, lie down upon a couch without using a pillow; lie on the back, and very slowly inhale through the nostrils. Hold the breath while you count mentally about five. Slowly exhale. What you are trying to do is to cultivate the use of the *abdominal*, not the chest, muscles. Breathe from the abdomen. This will not be accomplished at first. The ribs have so much the habit of rising with inhalation they may, for a time, persist, but as the abdomen learns how to rise and sink, through the intelligent co-operation of your will, this upper rib breathing will yield somewhat, and finally, after considerable practice, will give way entirely to

True Abdominal Breathing.

Viola: And is that all there is of it? How very simple and easy to comprehend.

Doctor: Because it is the "speech of nature." In connection with the direction just given, I would recommend kneading, pinching, deeply stroking, rubbing the weak abdominal muscles. These movements will bring about true breathing much sooner, for it is only muscular tone that is required in these parts. This is really a powerful medical, as well as hygienic, measure. Observe what takes place in the act of a deep inspiration and expiration. How the viscera are pressed against the diaphragm, all the abdominal and pelvic contents prompted to yield their aid in forcing the blood forward, and quickly receiving the incoming flow. Thus circulation, digestion, nutrition, assimilation, etc., are promoted. Blood cannot stagnate in organs thus moved; congestions and malpositions die a natural death. Very much might be said here, but you have already become acquainted with laws and principles which will guide in extending the application of to-day's lesson.

Julia: Is deep breathing to be practiced only when lying flat?

Doctor: At first that is the position best suited to acquiring the habit, which is more rapidly and easily attained than in an upright position; but when actually able to breathe rightly, the upright or any other position will do. When walking or running, or doing any active bodily work, do not perform your exercises in voluntary deep breathing; because when we walk, the abdominal muscles are called upon to assist in the locomotion of the whole body, and that is a contractile effort required as of any muscle used. For deep inhalation just the opposite condition, relaxation, must be reached; so the two are antagonistic.

Viola: In a little book by Ciccolani I find this: "I advise the pupil of singing *always to breathe through the nose*, and during the hour devoted exclusively to practice, to take a *sitting*, or even a backward *reclining* position. This is the secret employed by the Italian masters to develop deep breathing in their pupils, and it is certainly most effectual, for in this position the various muscles which can impede respiration are passive."

Doctor: I will give you this added instruction. While lying, say aloud the vowel sounds, beginning with *a*, as *a*, *ah*, etc, then *e*, and so on through the vowels. Then take up the consonants. Try to say *b* without the *e;* thus with the whole consonant letters. Soon as you can breathe well, stand, and with hands on the sides, just over the region of the lower ribs, take these vocal exercises. Observe that the hands would, if the impulse were projected sufficiently, fly off each way, the abdominal breathing muscles are so developed. I have frequently said to a lecture-room full of ladies: "I doubt that one can be found here who knows how to breathe correctly!" And it is true that not one in fifty had use of the abdominal muscles sufficiently to allow breathing from any other part than the upper rib region. The voice was caught and held by the *larynx* and very upper lung. With what amazement, as though I suddenly dropped from some other planet, these women observe the motion communicated to my breathing muscles as I give practical illustration of the lesson. Largely, by this simple

training, over a quarter of a century ago, I was saved from serious throat and lung disease, and during these years have helped scores of weak-lunged and weaker-abdomened women to become deep breathers and healthy livers.

CHAPTER XVII.

DIETETICS.

True Eating Art.

Doctor: The True Eating Art has such potentialities for human advancement, that one day, through the progressive working of God, it will enter the practical thought of philanthropists not only, but scientists, and be acknowledged a power in every field of human development. Eating to live, rather than the usual plan of living to eat, is a question which our limits forbid entering upon fully; it is like a great tree that strikes its roots deep into the soil of human life, and spreads its branches far over the surface of human society. I give only a few hints, earnestly hoping that interest may be aroused and desire enkindled for very thorough knowledge of these things which so affect human happiness and *human destiny.* Yes, human destiny. We appeal to the conscience and moral sense. "No man liveth to himself." I find these words in a little pamphlet:

"We are social, sympathetic, and

Morally Responsible Beings.

The words we utter, the feelings we indulge, the thoughts we think, the appetites we create or foster, the spirit we manifest, the life we live, and the destiny we realize, all these have a vital and inseparable connection with our system of diet. Does any one deny this? He is an infidel and has denied the faith, not only of Christianity, but of intelligent, thoughtful manhood" (and womanhood).

"Whether ye eat, or whether ye drink, or whatsoever ye do, do all to the glory of God," is one of the most comprehensive, sublime, and beautiful precepts of Holy Writ. And surely that creature most truly obeys, most truly honors and glorifies its

Creator in eating and drinking, which selects the most appropriate diet to nourish and invigorate it, so as to attain the highest degree of sound health, and maintain it to the longest possible period of existence. Any deliberate deviation from the known laws of life and health, is not only sinful, but suicidal. "Be not deceived, God is not mocked. Whatsoever a man soweth that shall be also reap. He that soweth to the flesh," by his eating and drinking that which stimulates his sensual nature, the baser appetites, or the morbid cravings of diseased stomachs, "shall of the flesh reap corruption." Knowledge sufficient to qualify one for deciding intelligently upon dietetic questions is very easily attainable, and the power which woman may exert here is beyond estimate. For the mother not only influences, but guides her children into ways which may prepare them to become stalwart warriors in the battle of life. The difficulties which beset her pathway are met by that inward strength which enables her to encounter joyfully and triumphantly overcome them. For she knows her work is to tell upon the years to come, when, with sound constitutions, and simple, natural habits, her "little men and women" step out from under the sheltering branches of the home-tree, well prepared for their life-work in whatever part of the great vineyard it is appointed. The service of woman who is not wife or mother is no less available and demanded. The diet of the future will not be decided by custom or perverted appetency, but by enlightened judgment. The spirit of progress which has led whole nations to the various points of excellence now attained, as seen in the rapid strides made in science and art, will not overlook or neglect this pivotal center upon which turn the mighty interests of human development. Woman, in whatever position in society, finds here a mission. She must prepare herself to fulfill it, learn the needs of the physical body, make herself acquainted with its composition and the elements which go to sustain it, and select food which contains them. She is capable of leading man, even to the very summit of right endeavor, where the clamorous voice of appetite is stilled. "The winds are all hushed, and the waters at rest." His intellect perceives the wisdom of the Pythagorean teaching, "Fix upon that course of life which is best; custom will render it most delightful."

I will introduce you to one of the most learned, scientific, and practical writers of the age, JONATHAN PEREIRA, M. D., F. R. L., and L. S., well known throughout England and America. From his teachings it will be our privilege to gather facts relating to *food*, which will aid in answering the vexed question,

WHAT IS FOOD?

Julia: That is an easy question, and I know all about it. In fact, who does not? Food is things to eat; something people like, because it tastes good; it makes them feel better. It ought to be rich, for then it gives more strength. I mean it should contain a large proportion of fat, lard, butter, and cream. Well seasoned, too—plenty of salt, pepper, vinegar, mustard, and spices. Some things should be very sweet. Tea and coffee must be strong, and real hot, with good cream and sugar, if you like. I do not believe in poor bread. It ought to be white, and yeast bread may be good with only a little lard; but biscuits need to be rich, and well raised with baking powder and soda, and eaten hot. Good rich pastry, puddings, cakes, preserves, pickles and table sauces ought to form a part of the day's living; and fresh meat is indispensable three times a day. If that cannot be had, pickled or salted meat. I have always had dyspepsia, in fact, never have known what health is; sick headaches every few days prevent me taking a mouthful of food for hours and hours; then, again, I have to get up and eat a good lunch in the middle of the night, or I would faint. Brother has been induced to join the temperance society since his last "attack." The doctor said he would die if he did not quit using whisky. Poor fellow! we have to keep fixing up good dishes for him to eat, he is so tormented with that craving for stimulants. But I have trespassed on your time, yet what less could one say? This subject seems such a vast one, and I always did like to talk about eating. There are so many articles in the papers and magazines now that have something to say about food; I am quite interested in reading, yet do not learn very much.

Viola: But the doors of nature's treasure-house are opened wide; they have yielded to the pick and chisel of science;

mystery and baseless notion no longer hover about its portals; the stifling atmosphere of ignorance no more pervades its spacious chambers. We have free access to all departments, may gather precious foundation stones, and build upon them structures enduring as humanity, for they are laid in God's own truth.

Julia: Your talk is all new to me. I never realized that the science of dietetics had any very important bearing. But I wish to learn all about it.

Doctor: There is no science of dietetics. It is proper to say the art of dietetics, or dietetic art is better. There is an important distinction between science and art. As the facts of chemistry are so valuable in yielding a knowledge of the relations between food and the human organism, Viola will give from Pereira a concise statement of the

Chemical Elements of Foods.

Viola: All known bodies, *mineral and organized*, are composed of fifty-five or fifty-six *Chemical Elements.* From these elements chemists fail to extract other substances of entirely different properties. Hence they are called *simple* or chemical elements. Nineteen of these simple elements have been found in *organized bodies*, animal and vegetable. *Thirteen* of these *nineteen* elements are regarded as essential constituents of the human body. Therefore, the same must be the elements of our food.

From Pereira I copy this table of the

Chemical Elements of the Food of Man.

1. Carbon.
2. Hydrogen.
3. Oxygen.
4. Nitrogen.
5. Phosphorus.
6. Sulphur.
7. Iron.
8. Chlorine.
9. Sodium.
10. Calcium.
11. Potassium.
12. Magnesium.
13. Fluorine.

Proximate Elements of Food.

Water, Gum, Starch, Lignine, Jelly, Fat, Fibrine, Albumen, Caseine, Gluten, Gelatine, Acids, Salts, and Alcohol.

These are all compounded of two or more chemical elements, and all, except alcohol, produced in the process of organic growth and development in the vegetable kingdom. Alcohol is the result of death and putrefaction of organic matter.

Doctor: As the point should be thoroughly understood, please tell us what *foods proper* are.

Viola: Foods are *compounds of these proximate elements* in various proportions, just as these are compounds of the ultimate *chemical elements. None* of these *proximate elements of food*, alone, are capable of *prolonged nutrition in animals*. Another fact is learned by experiment. Chemically tested, a substance may seem to yield much in nutritive properties, but experience proves the lack of alimentary power in the substance. For instance, dogs fed on fine flour, butter, and sugar die of starvation, though at first they grow plump and fat. So of horses, if fed on the most nutritious grains. Examples are only too abundant of human beings, whose food consists of superfine flour, fats, sweets, and starchy substances, becoming diseased and weakly.

Doctor: Describe each of these proximate elements, so that we may become familiar with them, which it is useful to do.

Viola: Water, constituting about three-fourths of the entire weight of the body, is essential to the performance of all the vital processes, and may be called a *liquid element.* All the other elements, or foods, are solid, or solids dissolved in water. "Water," says Pereira, "is probably the drink of adults. It serves several important purposes in the animal economy. *First*, it repairs the loss of the aqueous part of the blood, caused by evaporation and the action of the secreting and exhaling organs. *Secondly*, it is a solvent of various alimentary substances, and, therefore, assists the stomach in the act of digestion. *Thirdly*, it is probably a nutritive agent; that is, it assists in the formation of the solid parts of the body." The water, which constitutes the principal part of the blood and of the living tissues, assists in several ways in carrying on the vital processes. "The blood," says Dr. Prout—"the solid organized particles are transported from one place to another, arranged in the place desired, and again are finally removed and expelled from the

body chiefly by the agency of the water present. *Lastly*, water contributes to most of the transpositions which occur in the body. As a solvent, it serves not only to aid digestion, but also to effect other changes." Gum is the mucilaginous principle. It exists almost universally in vegetables and plants. Arabic, Senegal, East Indian, Barbary, Tragacanth, Cherry, Plum exude from the stems of trees and plants. It is found in barley meal, oat meal, wheat meal, rye meal, corn, rice, pease, beans, potatoes, cabbage, pears, gooseberries, cherries, apricots, peaches, linseed, marsh-mallow root, almonds, etc. Sugar is very generally distributed throughout the vegetable kingdom. It is found in the grains, barley, rye, oats, wheat, corn, rice, etc.; in fruits, grapes, apples, pears, peaches, berries, cherries, etc.; in vegetables, carrots, beets, potatoes, pease, etc.; in nuts, also, and in milk. Starch is found in the seeds, fruits, roots, stems, tubercles, and masses of a large portion of the vegetable kingdom. It is called the *amylaceous* alimentary principle. The grains, wheat, rye, corn, barley, oats, rice, contain it; also pease, beans, potatoes, arrowroot, Iceland moss, etc. Starch made from grains is used as a food, but it is far inferior to the whole grain as a dietetic article. As a dessert it may be employed, but not as nutriment. The different kinds of amylaceous matters in use are sago, tapioca, arrowroot, rice, starch, potato-starch, corn-starch, and a preparation of Iceland moss. Lignine is the woody fiber which constitutes the basis of all vegetable structure. It forms the skin of potatoes, grapes, gooseberries, etc.; the peel and core of apples and pears, with skin and stone of peaches, plums, apricots, etc.; the seed coats of the kernels of nuts; the membranous coverings of beans and pease; the rind of melons, cucumbers, etc., and the bran of grains. Linnæus states that the Laplanders eat bark bread, made from the bark of a species of pine, during a great part of the winter, and sometimes even during the whole year.

Doctor: The ligneous matters of our vegetable foods are as important as any other; for, while they are sometimes put down by authors as innutritious, none other, not even all of them together, can sustain the body in health if there is no admixture of this woody element. It is now well proved that it is not in the *mechanical stimulus* alone, serving to promote the

action of the bowels, that its chief value resides. Dr. Prout remarks: "Of the numerous shapes assumed by lignine, the best adapted for excremental purposes is undoubtedly the external of the seeds of the cerealia, and particularly of the wheat. Bread, therefore, made with undressed flour, or even with an extra quantity of bran, is the best form in which farinaceous and excremental matter can usually be taken; not only in diabetes, but in most of the other varieties of dyspepsia accompanied by obstinate constipation. This is a remedy the efficacy of which has long been known and admitted; yet, strange to say, the generality of mankind choose to consult their taste rather than their reason, and by officiously separating what nature has beneficially combined, entail upon themselves discomfort and misery."

Viola: Jelly is found in most animals and vegetables. The *Pectinaceous Alimentary Principle* of Pereira is *Vegetable Jelly. Pectine* is derived from a word meaning *coagulum.* Vegetable jelly has for its base starch and pectine, or pectic acid. One or both of them are found in most pulpy fruits: in currants, apples, pears, quinces, peaches, grapes; all the berries, oranges, lemons, cherries, etc. It is obtained also from beets, carrots, turnips, celery, onions, etc. Sugar promotes the solidification of pectine and pectic acid, and it is employed in making jellies. The Acidulous Alimentary Principle is constituted of the *Organic Acids.* These are the *Acetic, Citric, Tartaric, Malic, Oxalic,* and *Lactic. Acetic acid* is the acid of vinegar. Like alcohol, it is the result of fermentation. The habitual use of it is injurious.

Citric Acid, Concrete Acid of Lemons, is found in the juice of the lemon, orange, lime, citron, shaddock, and other citrous fruits. The cranberry has it. Mixed with an equal quantity of malic acid, it is found in the gooseberry, red currant, strawberry, raspberry, cherry, and bilberry. It is in the pulp of the tamarind, mixed with both malic and tartaric acid. *Tartaric Acid,* in free state, is found in tamarinds, grapes, and pine-apples. In the form of Cream of Tartar it exists in tamarinds, grapes, and mulberries. *Malic Acid,* or acid of apples, pears, quinces, plums, apricots, peaches, cherries, gooseberries, currants, strawberries, raspberries, pine-apples, barberries, elder-

berries, grapes, tamarinds, and several other fruits. *Oxalic Acid* is found in rhubarb, sorrel, and some other plants. *Lactic Acid*, or Milk Acid, exists in sour milk. It is also formed when various vegetables become sour. Trall says: "This acid, like vinegar, a product of decomposition instead of organic formation, is in no sense an aliment." *The Oily Alimentary Principle*—oleaginous elements. Oils are of two kinds, *fixed* and *volatile*. Fixed oils include all fatty substances employed as food, whether obtained from animals or vegetables. Fat, suet, tallow, lard, marrows, grease, butter, and blubber are derived from the *animal kingdom*. Olive oil, cotton-seed oil, almond oil, and other nut oils from *vegetables*. "Fixed oils or fats," says Pereira, "are more difficult of digestion, and more obnoxious to the system, than any other alimentary principle. Indeed, in some obvious or concealed form, I believe they will be found to be the offending ingredient in nine-tenths of the dishes which disturb weak stomachs."

Doctor: Fats are peculiarly apt to become rancid on exposure to the air; a high degree of heat also produces chemical changes which render them extremely irritating to the digestive organs. *Fried dishes* of all kinds are an abomination to the stomach, and food cooked in butter is obnoxious, because under the influence of heat the acrid volatile acids of butter are set free. That is why melted butter, buttered toast, buttered cakes, pastry, suet pudding, and all such dishes are so hurtful. The vegetable fixed oils are less indigestible than the animal, and have less tendency to putrescence. I believe that persons living on a simple, unstimulating diet will find the employment of these oils to be entirely satisfactory, especially in cold weather. There is such a variety of nuts, one can make choice of the less oily, perhaps, if the richer give disturbance. These would form a part of the meal, of course, and never be taken alone or after a full meal.

Viola: Volatile Oils belong to Vegetable Oils, and are useful in condiments. Mint, marjoram, savory, sage, and thyme, called sweet herbs; and caraway, anise, fennel, parsley, mustard, horse-radish, water cresses, garlics, onions, eschalots, owe their peculiar flavoring power to volatile oil; as also do the *spices*, cinnamon, nutmeg, mace, cloves, allspice, pepper, and

ginger. These oils stimulate, but do not nourish; they have no value as aliments. The *Proteinaceous Alimentary Principle:* Albuminous Substances are *Vegetable Fibrine*, *Albumen*, *Caseine*, *Gluten.* The fibrine, albumen, and caseine of vegetables are chemically identical with those of animals. Vegetable fibrine exists abundantly in wheat, rye, oats, barley, corn, buckwheat, rice, and the juice of grapes. *Animal Fibrine* is the principal constituent of lean flesh, and is found in the blood. *Vegetable Albumen* is found in abundance in oily seeds, almonds, nuts, etc.; also in wheat and other grains; the juice of turnips, asparagus, etc. The animal albumen exists in the solid state in flesh, glands, and viscera, in the fluid state of the egg, and in the serum of the blood. *Vegetable Caseine*, or *Legumen*, found chiefly in pease, beans, lentils; the leguminous seeds; almonds, nuts, and other oily seeds contain it with albumen; it is also contained in many vegetable juices. *Animal Caseine* is the coagulable matter in milk, and forms its curd. Cheese is the coagulated caseine deprived of its whey, and mixed with more or less of butter. When rich with butter, cheese is very liable to undergo spontaneous decomposition and generate active poisons. The strong flavor of old cheese depends on oleic acid and an acrid oil, which is extremely unwholesome; while as a food liquid caseine and fresh cheese curd are wholesome articles. *Gluten:* This is the substance left after washing away the gum, sugar, and starch of wheaten dough. It is a mixture of several organic principles. It renders wheaten flour adhesive, and is capable of being manufactured into pastes, as macaroni, vermicelli, etc. Because wheat contains more gluten than the other grains, it is superior for making fermented bread and crackers. But the panary fermentation must not proceed beyond the point of converting the sugar of the flour into carbonic acid gas, which being diffused among the particles of gluten raises the dough; for here begins decomposition of the gluten, which is decay. Flour deprived of the gluten of the wheat, under which general name may be classed the phosphatic and nitrogenous elements—which are stored principally between the outer wraps and the inner starch body of the kernel—has lost the greater part of its blood-making materials. *The Gelatinous Alimentary Principle:* Gelatine is derived from the gelatinous

tissues of animals, the skin, tendons, cartilages, cellular and serous membranes. A trembling jelly is obtained, called animal jelly. It is used as food for invalids. Calves' foot jelly used to be a great favorite; but it is less esteemed now, as it is well known to be inferior to even simple gruel as a nutriment. Isinglass and hartshorn are gelatinous substances employed in the preparation of jellies. *The Saline Alimentary Principle:* Saline matters are essential constituents of the blood, of the organized tissues, and of the secretions. They are, therefore, necessary components of our food; for without them health and vitality cannot be maintained. These matters exist in small, but varying, proportions in fruits, vegetables, and grains. None but chloride of sodium is used as a condiment, and it is as such not essential, nature having combined it to suit the dietetic needs of men and animals. This is true of the earthy phosphates found in food. Wheat, rye, barley, oats, caseine, milk, flesh, etc., supply the system with the due amount of salts and phosphates. Minute quantities of potash salts are found in most vegetable food and in the blood, solids, and secretions of animals.

Doctor: You have laid the authorities in chemistry and dietetics under heavy contribution, and these gathered facts will form the foundation of an enduring superstructure. It is only the truths of nature you seek to incorporate, and that is well, for

> "Laboring art can never ransom Nature
> From her inaidablé estate."

The unwisdom of attempting to do what nature does so infinitely better without our interference, is made conspicuous in our miserable failures. Chemistry so claims our admiration for the marvelous discoveries and triumphant revealings in the realm of matter, that our self-love and pride of scientific attainment are liable to become so inflated and overpowering that we fancy ourselves able to supply whatever factor it pleases us to consider lacking in the domain of physiology. Because chemistry can tell some things, it does not follow that there is no line at which the "proud waves" of chemical analysis are stayed.

There *is* such a line, and that is precisely where life reigns sovereign and will always preside. It is from the living body that experience establishes the facts of nutrition. Chemistry analyzes the substance of an animal body, and tells of its composition. Inferring from the knowledge thus gained what elements are essential for the nourishment of a like animal, we supply the elements which go to make flesh, bone, and all the substances of the body.

Results speedily prove that some very essential agent has been overlooked. The proximate principles, chemical elements, are there supplied, but why does the body languish? What is lacking? "That mysterious, pervading power, *vitality*, which will not yield her scepter to another." This is nature's "inaidable estate." She has assigned human endeavor its province, and demands implicit regard for the limits beyond which it is not lawful to pass. When chemistry is thrust into the domain of vitality, when alimentary substances, which hold a normal relation to the vital organism, are displaced by made foods reputed to supply some lack existing in some particular portion of the system, it seems not to be understood that such meddlesomeness is hurtful to the best interests of the vital system. No amount or kind of approximate principles, as such, are assimilated; for instance, if lime, sulphur, sodium, etc., are lacking in any part of the body, the need can be supplied by food which holds these approximate principles intact, as nature provides them, not devitalized by any process of separation and exclusion of component parts. *Grains, fruits, and vegetables are found to contain all the elements that go to make up body, and to sustain it in health and strength;* so it seems reasonable to look to them for supply, and not to the mere approximate elements.

Julia: If grains, fruits, and vegetables contain all the food elements, why use the flesh of animals?

Doctor: There is no better reason for its use than that it is a custom, and notion says, "You *must* eat meat." Animal flesh is by no means the worst of food—nor is it the *best.*

Julia:

WHAT ARE ANIMALS CREATED FOR

if not to be used by man as food? If not killed and eaten the land would soon be overrun by them.

Doctor: You have the old argument, the utilitarian. As a Church woman you are familiar with that ancient hymn, the "Benedicite." What does it say?

> "O ye whales, and all that move in the waters,
> O all ye fowls of the air,
> O all ye beasts and cattle,
> Bless ye the Lord, praise Him, and magnify Him forever."

Julia: Will you point out some of the objections to the use of flesh as food?

Viola: Allow me to delay your answer, doctor; for I have something to offer, unshaped as it is. Man has been called "the epitome of the universe." In his body are contained the elements that comprise the kingdoms beneath him, and in him are represented the mineral, vegetable, and animal kingdoms. He is born on the lowest, the animal plane; in common with all animals, his first needs are only those of animal existence. But unlike animals, he has all the potentialities of a celestial angel. And this inborn

"Witness of the Spirit"

continually operates to draw him outward and upward, to the higher, the spiritual. By reason of man's freedom of the will, he may choose to yield to this inner prompting, or may try to content himself with the lower, mere animal life. His unregenerate tendencies bear wholly in this direction. Would he be "born again"—born "from above"? Would he pick up the golden threads which have become entangled or obscure, and follow their leadings back to God? He must then learn to "subdue all things" which hinder. If in his animal nature all the animal kingdom is represented, the good and the bad, I think if he does not feed and nourish and propagate the bad, they'll not trouble him long. Select the good, such as correspond to the best affections. Ask any child which it would rather be like, an innocent little lamb or a ferocious wild-cat, and you are sure of your answer in favor of the lamb. Teach the child that by cultivating the disposition in himself of one or the other, he becomes like it. *Now*—is this entirely too fanciful? May it not be helpful to bring this same thought to bear upon our food? For instance, if we wish to foster traits

which are like those of carnivorous animals, feed on the food which suits their natural constitution.

Doctor: "It cannot be a matter of indifference what a man eats and drinks. He is, in fact, choosing his animal and moral character when he selects his food."—*Lancet.* What did you ask, Julia? Oh, yes. Objections to animal food. Perhaps what was just said ought to be counted one, and first. It confirms bad animal propensities, and so is a hinderance to spiritual growth. Purely physical considerations would be those which relate to the supply of nutriment, in which it is abundantly proved that vegetable products excel, and to the

Diseases Connected with Food,

where we find animal food pre-eminent. There is a general sketch given by Parkes, in his large work on Practical Hygiene. In his microscopic examination of meat, he says, "In the flesh of cattle, or of the pig, *cysticerci* may be found. They are generally visible to the naked eye as small round bodies. When placed under a microscope with low power, their real nature is seen; they are sometimes so numerous as to cause the flesh to crackle on section. The smallest *cysticercus* noticed by Leuckart in the pig was about four one-hundredths of an inch long, and three one-hundredths broad; but they are generally much larger and will reach to two-tenths or three-tenths or three-fourths of an inch.

"In some countries they are extremely common in cattle, *cysticercus* of the ox produces in man" tape-worm. In sheep, Cobbold has described a *cysticercus* with a double crown of hooks, twenty-six in number. He thinks that probably a special tenia (tape-worm) may arise from this. *Trichinæ* may be present in the flesh of the pig; if encapsuled they will be seen with the naked eye as small round specks, but very often a microscope is necessary. The so-called *Rainey's capsules* are little, almost transparent bodies found in the flesh of oxen, sheep, and pigs, and Mr. Rainey states they increase in size as the animal gets older. Their length varies from one three-hundredth to one-fourth of an inch. They are narrow, lie in the sarcolemma, and appear often not to irritate the muscle.

In pigs these bodies sometimes produce paralysis of the hind legs, and a spotted or nodular eruption. In sheep they have been known to produce abscesses in the gullet, a swelling as large as a nut, containing a milky, purulent-looking fluid, with myriads of these corpuscles in it. Sheep affected in this way often die suddenly. It is *by no means improbable* that man may be affected by the use of flesh thus infested. Doubtless a very great quantity of

Meat from Diseased Animals

is brought into the market, and it is impossible to know what is diseased and what is not. Instances are not uncommon in which persons, after partaking of butchers' meat, have been taken seriously ill with gastro-intestinal symptoms, resembling cholera at first, and afterward typhoid fever. On analysis of the meat no poison has been found. But we must conclude, from general principles, that all diseases *must affect the composition of the flesh*; and as the composition of our own bodies is inextricably blended with the composition of the substances we eat, it must be of the greatest importance for health to have these substances *as pure as possible.*

Animal poisons and infested meats may be partially neutralized or destroyed by cooking; but no preparation can remove the influence which these poisons exert on the composition of the muscles. Poisonous symptoms are sometimes produced by the flesh of even *healthy* animals. Pork, when the pig showed no signs of disease, has often given rise to even cholera symptoms. So of some kinds of fish; and oysters also produce severe gastro-intestinal irritation.

The *flesh of healthy animals, when decomposing*, often gives rise to the same disorder—vomiting, purging, and great depression, and sometimes severe febrile symptoms occur. Cooking does not appear to check the decomposition. Sausages, pork pies, and even beefsteak pies, sometimes become poisonous from the formation of an as yet unknown substance—which is, perhaps, of a fatty nature. The symptoms are severe intestinal irritation, followed rapidly by nervous oppression and collapse. Neither salts nor spices hinder the production of this poison.

Dr. Ballard has reported two very remarkable cases of poisoning by ham and hot baked pork. In both cases numbers of persons who partook of the meat were taken ill, and some died. Dr. Blein examined the meat, and found it loaded with *baccilli*, which were also found in the organs of the fatal cases. Oysters and shell-fish, when decomposing, also produce marked symptoms of the same kind.

The fresh and *not decomposing flesh of diseased animals* causes, in many cases, injurious effects; and the probability is that, when attention is directed to this subject, the effect of diseased meat will be found to be more considerable than at present believed.

The flesh of *over-driven* animals is said by Professor Gamgee to contain a poison which often produces eczema on the skin of those who handle it, and eating the flesh is said to have been attended with bad effects. Chronic wasting diseases, phthisis, dropsy, etc., in cattle give rise to sickness and diarrhœa. Grave doubts have recently arisen as to whether tuberculosis may not be communicable to man through flesh of cattle suffering from that disease.

Malignant pustule in cattle is by some good authority thought to be the cause of the same affection in those who have partaken of the flesh.

Menschel has recorded a case in which twenty-four persons were seized with malignant pustule after eating the flesh of beasts suffering from the disease.

It is also stated that pigs fed on the flesh got the disease, and that a woman who ate some of the diseased pork was also attacked.

With regard to erysipelas carbunculosum, Dr. Keith mentions two cases of death by poisoning from eating the flesh of an animal affected.

Medicines given to sick animals produce in those who eat the flesh vomiting and diarrhœa.

Arsenic is sometimes given, and the flesh may contain enough arsenic to be dangerous.

Viola: I saw at once what must be the result of eating diseased flesh, and it now appears that objections quite similar apply to healthy animals as food. The materials which freight

the blood on their way to the eliminating organs, there to be thrown out as effete, poisonous matter constituting the excreta of the system, bile, urine, sweat, fæces, etc., are, at the instant life becomes extinct, arrested in their course, consequently retained in the flesh of the animal, and necessarily consumed by the eater. This is a well-known, but disgusting fact—that meat owes its stimulating property to the presence of this effete matter.

Julia: But in sickness we have to use beef-tea, as every one knows, and the doctors always prescribe it.

Doctor: Viola, read aloud that leaflet by T. R. Allinson, L. R. C. P., of London, Eng.

Viola:

The Beef-tea Delusion.

The question of the importance of beef-tea in sickness and in ailments of every kind is constantly thrown at the non-flesh-eater. The beef-eater thinks he has got us in a corner and posed us, when he brings forward the beef-tea question. He asks you why it is always ordered by the doctor, leaving you to infer that beef-tea is the sheet-anchor in disease, and that without it the patient would die of a certainty. Now, let us look at the composition of Liebig's extract, then of "real good beef-tea," so called. Liebig's extract is made from lean beef, so that, in the first place, all its fatty or carbonaceous matter is absent. In the second place, it contains no albumen, as that is left behind in the muscle. Then what does it consist of? Chiefly of excrementitious matters, such as leucosin, tyrosin, xanthin, sarcolactic acid, with other extractive matters and salts. These substances are stimulant and poisonous, so that to feed any one on such stuff is equal to giving him slow poison. Liebig's extract, then, instead of being nourishing, is harmful; when examined by the light of common science (that is, common sense), its real hurtful properties are seen. Yet thousands of people are deluded by the wide-spread advertisements of this company.

People imagine it must be good, since forty pounds of flesh yield only one of extract. As if one could compress forty pounds of nourishment into one pound. It is impossible!

Next, home-made beef-tea must be seen to. The kind, motherly lady tells you her beef-tea is genuine and strong, and forms a good solid jelly when cold. On the strength of this tottering or trembling mass she imagines it must be good and nourishing. Let us see how she makes it. She buys lean beef, and carefully removes all the fat; then minces it fine and puts it in a jar in the oven; no water must be added, or any other material. At the end of two or three hours she removes it, and presses out all the fluid, taking care to remove all traces of fat. This is her beef-tea, which on going cold forms a jelly. This is a very little better than Liebig's extract, except that it contains a little albumen as well, which causes it to form a jelly. And this albumen is all the nourishment it contains; verily is it a poor and expensive kind of food! Now, to show the value of beef-tea, I will give the result of some French experiments on dogs. Two sets were taken, as much like each other as possible, and kept apart. The best beef-tea that science could make was made, and one set of dogs was fed on it, whilst the other set of dogs was fed on the refuse left in making the beef-tea for the first set. The results were that the beef-tea-fed dogs died of slow starvation, whilst those fed on the refuse lived on, and seemed very little the worse for the experiment. Our opponents do not know this, or we should hear little more of the beef-tea delusion.

You may, then, want to know how it is that doctors order it. I answer, for two reasons. First, because they do not know the composition of it, and would be considered guilty of negligence if they did not order it; secondly, those who do know its composition often order it when they wish to starve a person, and thus rid him of his disease; or they order it to be made with rice, barley, etc., and then they know it is nourishing. When beef-eating patients want beef-tea, I always order the above to be added to it.

Julia: I can relinquish my beef-tea, when sick, in favor of your substitute, vegetable-tea and bran-tea, and fruit-juices, but the wonder, What am I to eat, when well, if I give up meat? will intrude itself, and—

Viola: In the "Dietetic Reformer," you will find answer in these words of Mrs. C. A. Soule:

Nothing to Eat, If I Give Up My Meat.

"But I shall have nothing to eat, nothing to eat,
If I give up my meat, if I give up my meat!"
So said a friend the other day
When I begged him to eat in wisdom's way.
Nothing to eat, if you give up your meat?
Did you never hear of barley, of oats, of rye, of wheat,
Of bread, of biscuits, of rusks, of scones?
All of them good for muscles and bones!
Did you never hear of pudding and pies,
Pleasant to taste, and fair to the eyes?
Did you never hear of the buckwheat cakes
Which the Yankee wife on the griddle bakes?
Did you never hear of that wonderful dish,
Porridge, with milk or cream as you wish?
Did you never hear of wheaten grits,
And how they sharpen up your wits?
Did you never hear of *sago*, *tapioca*, *pearl barley*, and *rice*,
And *hominy pancakes*, hot and nice?
Did you never hear of the meal of "maize,"
And the *Johnny cakes* it will raise?
Of southern *pones* and puddings hasty,
Both so healthy and both so tasty?
Did you never hear of *vermicelli* broth?
To taste it you'd be nothing loath;
While *macaroni* boiled with *cheese*
Will put your stomach quite at ease;
And if you've supper late at night,
A bowl of *arrowroot* is light;
While *semolina* a dish will make
You'll find it pleasant to partake.
Did you never think that out of the earth
A thousand good things to eat have birth?
Think of the *turnips*, *cabbage*, *potatoes*,
Parsnips, *carrots*, *cauliflowers*, and *tomatoes!*
Think of *Indian corn* fresh from the ear,
And *Lima beans* from the poles so near!
Why, one could live on Succatash,
So long as he has his teeth to gnash!
Then think of the soup of *onions* and *lentils*,
Fit for Jews as well as the Gentiles;
Think of *pease* so green and *beets* so red,
And *parsley* and *kale* with curly head;
Of *string* and *shell* and *haricot beans*,
They'll put the flesh on puny weans.
And there are the *radishes* red and white,
And *pumpkins* dressed in orange bright;
Summer and winter *squashes* in yellow,
And *marrows* with pulp so rich and mellow;
Cucumbers from the vines so fair,
And *salsify*, tasting like dainty rare;
Celery, good for unsteady nerve;
Okra, in stew and soup to serve;
Asparagus fit for king or queen
With bits of toast served in between;

Mushrooms gathered ere sun is up,
With dewdrops fresh on each snowy cup;
Spinach, with sauce of tiny *capers*,
And *lettuce* crisp as the fairies' papers;
Sweet *potatoes* from sunny south,
Melting in richness in your mouth;
And *yams* that are bigger and sweeter still,
Each one serving a platter to fill;
And, let me think—yes, *Brussels sprouts*
Will help this list to just make out.
And think of the things that grow on trees
And sun themselves softly in every breeze—
Apples green, yellow, russet, and red
(What a thought they put in old Newton's head),
And *peaches*, *plums*, *cherries*, and *pears*,
Nectarines, *apricots*, *pine-apples* rare,
Oranges, *lemons*, *limes*, *figs*, *quinces*, and *dates*,
Greengages, *egg-plums*, and *damsons* late;
Prunes, *pomegranates*, *bananas*, *olives* green,
With *shaddocks* and *bread-fruit* mixed between.
Surely one could live a week,
And ne'er *forbidden fruit* need seek.
Think too of *strawberries*, *raspberries*,
Blackberries, *gooseberries*, *barberries*,
And *cranberries* lifting their ruby heads
From their damp and mossy and quivering beds;
And if you go to New England think of *huckleberry pie*
(Ah, friend! eat that when it's fresh—and die;
For never will earth give a greater treat
In the shape of something that's good to eat).
Think of the *melons*—so many kinds—
And the richness hid beneath their rinds;
Think of the *grapes*—white, green, purple, and red,
They'll never make you feel queer in your head;
Think of grapes when fresh and grapes when dried—
But for them old Crusoe might have died—
Oh! the pure juice fresh from the ripened skin
Will warm you without and warm you within,
And never make you a shaky thing,
Nor ruin nor misery on you bring.
And think of *currants*—red, white, and black;
And *tamarinds* a nice drink will make
If feverish you should chance to wake.
Then think of the *nuts* so many and fine
To serve for dessert whenever you dine;
And of the preserves from distant climes—
Ginger and *orange*, *citron* and *limes*;
And of all the *jellies* the good wife makes,
And of all the *custards* and *tarts* she bakes;
Of the *creams* and *ices* and *candied fruit*,
Surely these would a monarch suit.
And more than these I might write down
If I gazed at shops within the town.
I use just now familiar names,
Passing those of a higher fame;
I only want to show you that,
Be you lean or be you fat,

If you consent to give up *meat*
You'll find enough that's good to eat.
With *fresh eggs*, *cream cheese*, and *butter*,
I'm sure I see no need that you mutter,
"Nothing to eat, nothing to eat,
Nothing to eat if I give up my meat!"
And with *milk*, *sugar*, *coffee*, and *tea*,
You ought to be merry as merry can be.
Oh, there's plenty to eat, plenty to eat—
Out of the ground you can raise your food,
And you'll find it healthy, nutritious, and good.
Then give up your meat, give up your meat,
We'll find you enough that is good to eat.

Dietetic Reform.

"Earth shall bless you, O noble emenders
Of the nations. Ye shall lead
The ploughshare of the world, and sow new splendors
Into the furrows of things for seed,—
Ever the richer for what you have given."

Doctor: "The monstrous evils and abuses, which gradually and stealthily have invaded our daily foods and drinks, have now reached to such a pitch that they can no longer be winked at. He who desires to work for the improvement of the human species, for the elevation of the human soul, and the invigoration of the human body, dares not leave uncontested the general, dominant unnaturalness of living."

These words from Strube convey the sentiments of every one at all awake to the tendencies of those evils and abuses. Nor are the difficulties to be encountered, in attempting to remove the fixed prejudices which are so long established and so deeply rooted in human society, to be lightly considered. The torpor of our religious people, the unsympathizing attitude of the world's earnest workers in almost every other humanitarian field, and the ungenerous, merciless conduct of those whose habits are founded on mere custom, the outgrowth of false and often pernicious notions, are obstacles mountain high.

Viola: Some one has said

Custom is Mighty,

but it is not almighty. May not even the "great minority" promote the cause of humanity by drawing heavily upon the stores of both science and religion, and thus make custom an ally?

Doctor: Religion! Here is the glaring defect. It seems to me that man is not practically looked upon as a religious being in any way relating to the *body*. Whatever concerns his food and drink, clothing, housing, and sanitation is separated from all thought of him as a religious being. It was not so in Bible times. Nor were the lines between the Hebrews and surrounding nations so indistinct as those which would separate Christians from the ungodly. The care in selection and preparation of food observed by the people of God in those early times, was, doubtless, one of the distinctive means which rendered them a "peculiar people." Not so with Christians. They are, in this respect, not a whit better than heathen. I need not cite examples, they are all about you. Priest and people unite in the attempt to sever soul from body, to destroy, disunite that which "God hath joined together" so marvelously. And with what result? Answer, you who are not deaf to the unavailing importunities of earnest souls, nor blind to their anxious weariness in the pitiless labor which would save souls and let the body remain unsanctified. Oh! this separateness, how it clogs and hinders effort! Cannot good Christians see that Christ came to save "to the uttermost?" The renewal of life to the weak and sickly, almost dying and dead, religion of to-day, will come through the acceptance of the *Christ-life* as a *whole*. Body and its laws, soul and its laws, both must be respected and obeyed. If there ever was a time when law and command should be undeviatingly adhered to it is now, when such a flood of light bursts upon the mental vision that not to see truth is willfully to close the eye against it.

A writer in the *Boston Journal* remarks: "We have tunneled mountains, we have bound continents together by steamships and telegraphs, and have spanned them with railroads in order to bring to us our food, and we do not yet know enough about food to keep soul and body together with any degree of comfort, nor how to make the body the efficient instrument of the soul's higher activities!"

Julia: It looks strange and, I confess, not a little irreverent to bring religious obligations down to the level of physical life. What would our church people think to hear their rector discourse on cooking? Worse still, if worse could be, to mix up

praying and eating, worship and clothing, alms-giving and ventilation! All these things have plainly nothing to do with Christianity. It is unnatural and absurd so to associate them.

Viola: Let me ask, if our food is better selected, better prepared, and better eaten, will it not be likely to assist in reaching states of health and morality? Is it so easy to become regenerate and to lead others in right ways, that we can ignore any portion of God's plan? "Can we break one of the least of these commandments" and not be guilty of all? Why, then, should not the Christian religion encompass all that affects humanity? I think it does; and here is a field open for woman, which she must and will cultivate, as the Christ-idea enters more and more into the life, and His spiritual coming to create all things new is understood.

Doctor: By the light of this new age, read this:

"Man, the Bread Winner; Woman, the Loaf Giver."

By the ceaseless activity of man's intellect he has been impelled to wrench from nature her hidden secrets. From these he draws rich treasure; sciences are developed, and upon their facts the practical arts are built. Woman has done very little of all this; it is the work of the understanding, not of the will; of the intellect, not of the affections; of masculine strength, not feminine influence. And now, when the reign of the spiritual dawns upon our world, and woman sees herself enthroned queen of the realm, man brings to her all these rare gifts which he has so richly earned. *True woman* will repay man by bringing down to his field of labor, not the external organizing forces like his own, but the internal, spiritualizing power which elevates all that he is and does. She will realize the *truth* of the position in which God has placed her, appropriate the knowledge which man's wisdom, courage, and labor have secured in "science, literature, and philosophy." And through the love that is hers "immediately from God," she will bless man as he bestows blessings upon her through the instrumentality of his immediate gift, which is wisdom. "She gives him love, which is her dower from God, and a home which is the image of heaven."

Julia: There must be some religion in this matter, though I never looked upon it so before. And here is a thought; if woman gives man a home, is it for her to run out and leave him to take care of it? Who is to do the housekeeping? Woman gives from her own standpoint, and that, it seems, is the internal, the spiritual, and it is from this that all reforms begin; so, the home is the basis of progress and reform, and is woman's true sphere and work. Am I right?

Viola: You are practical, to say the least, and I do not see that we can "get around you." There is no study that presents greater needs, relating to the whole structure of society, than this one, which concerns housekeeping and the matters of right food and proper cooking. The health and all attendant beatitudes of the family and community are within the orderly province of woman. Does it not follow that perhaps she is largely responsible for the present lack of good health, which may arise from the same source.

Doctor: It is hard to criticise those whose very heartstrings are entwined with yours, whose arms grow weary contending against the flood and downward course of evil in all directions; who, with perhaps none to minister to them, find themselves alone with their ceaseless toil and vain endeavor; who feel

> "That thirst and hunger of the soul,
> That longing, that wild impulse and effort
> After something they have not and cannot have,
> The effort to be strong; and like the Spartan boy,
> To smile and smile, though secret wounds
> Do bleed beneath their cloaks."

It is because of my deep sympathy for woman, and belief in the high purpose she is to serve, that I confess myself willing, in the spirit of Christian charity, to point out some mistakes she has certainly made in her attitude toward homely duties.

The cause of these mistakes we have seen to be, and I will here repeat, *lack of the*

KNOWLEDGE OF HERSELF.

Consequently, she has looked in all directions but the proper one for her line of use, and with the results we see in the present unsatisfying condition of things. Man has better understood his nature than woman has hers, and has done his

work more in accordance with it; although, in not fulfilling his whole duty, and in not understanding woman-nature, he has held her under great disadvantages. This is expressed for instruction, not condemnation. Woman's condition in the past was an evolutionary progression towards the attainment of her exalted position, as priest and minister to humanity, in the path which God had appointed.

Julia: I suppose your criticisms begin where charity does, "at home." There are not many homes where much of an audience will be found. No woman stays at home these days if she can get away. And if she is there, housekeeping does not detain her. Women will do anything under the sun rather than take care of the house. Women who have money leave substitutes to assume home burdens. Those who have not get through the days the best they can, like so many martyrs. Women who, in the present chaotic, imperfect state of things, are obliged to become bread-winners, win in every possible field except the home-field. Poor girls will sew and starve rather than do plain house-work, and be well housed and fed. It all begins with the cultivated and gifted woman. Outside of home seems to be the arena where she may win in life's contest.

Doctor: There is a great deal to be said here; but if woman begins to realize that she rightly belongs at the "center of all social life and power," which is the *home*, as surely as the sun is the center of the solar system, she will find herself empowered to affect the whole world through her ministrations, and will set herself to find by what means this is to be attained. Hence the interest manifested by the more advanced woman in everything pertaining to conditions about the household. What you said is too true from a surface glance; but a deeper under-current is setting in, destined to bear off the transient and unnatural, and leave no trace of folly. *Good health* is seen to be the first requisite, in which not the least important element is found to be *good cooking*.

Viola: Cooking schools are established, and undoubtedly perform a wide use; but any intelligent woman ought to be capable of applying her knowledge in this direction, even without the aid of the schools. According to Ruskin, it means a good deal to be a good cook. He says: "It means the knowl-

edge of all fruits, herbs, balms, and spices; and of all that is healing and sweet in fields and groves; savory in meats; it means carefulness, inventiveness, watchfulness, willingness, and readiness of appliance. It means the economy of your great-grandmother's science, and that of modern chemists. It means no wasting; it means English thoroughness, French art, and Arabian hospitality. It means, in fine, that you are to be perfectly and always ladies (loaf-givers). And you are to see that everybody has something nice to eat."

Doctor: The very highest motives ought to actuate woman in acquiring knowledge of the culinary art, and applying the same; for there is no branch of study capable of yielding more beneficial results to herself, to her family, and to society. While, as you say, almost any woman may obtain, from her knowledge of familiar household science, the requisites for becoming a good cook, I am convinced there must be regular training schools devoted to fitting girls and women for these important and extended duties, by teaching them the practical modes of preparing food suitable for both the well and the sick. No young lady ought to consider her education "finished" while the ability to execute all the runs up and down the keyboard of cookery is lacking; with not only a few of the finer tones must she be familiar, but with every one.

The homely old saying, "The way to a man's heart is through his stomach," is replete with wisdom, viewed in the light we are disposed to look at these things. Preparing suitable, tasteful food for husband and children is a *privilege* not excelled by whatever else may come into woman's life. Her husband goes out into the coarse, rude world, and buffets the billows of adverse or favoring fortune, a struggle at *best* against fearful odds; while she, shielded and protected in her little kingdom, finds, in wisely and lovingly using the material provided by his strong arm and manly hands, the *method* of *blessing*, of *elevating him.* There goes forth from her soul a portion of *herself;* her loving sphere pervades the food she cooks as well as the words she speaks; and as he partakes that secret,

raises his higher nature to a higher power, which is the spiritual plane.

Viola: I know there is truth in what you say of the influence exerted by one's sphere, and surely, if this were generally understood, woman would not delegate this wifely and motherly office of food-preparation to the ignorant and indifferent hireling, any more than she would intrust the care of mind or morals to such a one. How sensitive children must be to this power, since it follows all the years of one's life. A husband never tires of telling how delicious his mother's cooking always tasted. He does not know that the mother-love wrought into that food attracted his spirit into a more ethereal atmosphere, where the happifying influences were unconsciously felt; and in the blindness of sense he ascribes the peculiarly delicious flavor to the material food alone.

Doctor: This is a truth, I believe, capable of scientific demonstration. I could cite numerous instances which have come under my own observation confirmatory of this truth, and the same could be done by any one. These serve as "guide-boards" to earnest, loving women who are striving to attain a fitness for life's work, so that failure and disappointment may not so often form a portion of its results.

Julia: You talk of woman's love being incorporated in the food she cooks. I do not question that truth, for even my limited experience holds too many instances to convince me, had I never read upon this subject. But it is a *vexed* matter; it seems to me that women do about enough work now, and you would add *immensely* to their burdens. What would become of co-operative housekeeping, general table supplies, all out of one big pot? How are all these "clubs," "quizzes," "scientific circles," and a host of the like to be kept alive if every wife and mother cooks? It will never be done, doctor, for women hate cooking.

Doctor: Have you not learned the difference between *woman* and *women?* Learn it, then, and in doing so it will be revealed to you that *woman loves cooking!* This is intensely practical talk. Why are all these clubs formed? Why are

women pushing investigation into every crook and cranny of science, art, and literature? Why are they found ministering to every need of humanity in every place more eminently than *at home?* Because woman is searching to find HERSELF! *When she comes*, and she is already here, in the minority, she finds herself, as I said long before in the words of Dr. Holcombe, the "central, highest figure in the creation." Her intellect, stimulated to search even the high standards of man in all pursuits of science, art, or literature, to acquire from his stores all the wisdom he has gained, *makes use of all this*, in her own womanly world, HOME. Her soul, imbued with the love of God, the neighbor, husband, and children, finds expression for that love in *deeds of love!*

How vain and hollow are all worldly, outside pretensions to intellectual attainment, or beauty, or social power, compared with such love. Less than this *woman* will never bestow upon husband and family.

Viola: Deeds of love would then include all that makes the man better and happier; all that develops and fosters the higher nature; all that overcomes the lower. Woman must have strength and opportunity for this work, which is so fundamental. Is not this teaching of yours revolutionary? With society, so engrossing and innumerable are its cares, there must be made radical change.

Doctor: Carlyle says: "Cast forth thy act, thy work, into the everlasting, ever-loving, ever-working universe; it is a seed grain that cannot die." "That is all, and nothing more." There are three grand divisions in society, the rich, the comfortable, and the poor. There is no financial consideration affecting this matter in the households of the rich. Woman would seem to be exempt here from homely duty. Is she? Are physiology and psychology peculiar in the rich? Are they not included in the "solidarity of the race?" Here the woman of wealth can buy no exemption, nor does she care to. Illustrious examples are abundant enough to prove that *love* dwells in palace as well as cottage. We learn that England's queen is careful in the management of her own household, and her daughters are trained in all the mysteries of housekeeping, even to cooking. Woman will find interest in these things when

she sees love the motive power. An hour or two daily spent in preparing and supervising the "daily bread" will bring a double reward. The husband and children are not only helped and comforted, but the mother acquires the power over servants which it is impossible to obtain otherwise; and through this power she blesses them also.

What beautiful, happy homes I have seen among the wealthy, where it was the mother's delight thus to spend a portion of the morning from a sense of love, not hateful obligation. Daughters early trained to look upon the hours shared with mother in the kitchen as golden ones, did not in after years find the care of their own households other than

A Joyful Privilege.

My heart aches when women talk of hating to cook, hating housekeeping, and much of like unwomanly expression. Woman of the comfortable class will find time for the exercise of talent and skill in prudently apportioning to use the abundant provisions placed at her disposal. If she has not strength, or having it, prefers not to use it in this direction, let her employ another to do all but the actual food preparation.

What a happy man the husband of such a woman must necessarily be! And the children, with such an example, such a teacher, such a *mother*, will find it difficult, even in the midst of outside temptations, to turn from so warm, so all-pervading a love.

Woman who shares the life of the poor will surely take pains to inform herself on all the economic and healthful methods of preparing proper sustenance for her loved ones. Here is a vast work. Here is the stepping-stone to better position in life. The cost of excellent nourishing food is very trifling. With care in selection and knowledge of right cookery, her family is made comfortable; the husband is devoted to the one who cheers his life of use—this word includes everything on the plane of effects—learns to respect himself because of the love she brings him, and to grow in manliness and in every good way. Children, whose bodies are supplied with food calculated to nourish and invigorate, will find their paths

to be an "upward trend;" and instead of falling victims to the vices which grow out of impoverished, depraved bodily states, will be found in the ranks of the temperate and thrifty.

The daughters of such a mother will be taught to cook and to do all other kinds of house-work, and when they go out to earn a living, rather than swell the already over-full and badly-paid avocations, falsely deemed more "respectable," it will be their delight to aid some weary homekeeper in her work, and in turn will receive food, shelter, and *wages*, much exceeding what would otherwise be earned, and a home feeling withal.

Thus the truths of dietetics are seen to be the basis of higher truths, and when understood and practiced will bring the race, both individually and collectively, to its highest good and happiness. In this light they are even as

> "Jewels five words long,
> That on the stretched fore-finger of all Time
> Sparkle forever."

CHAPTER XVIII.

HYGIENIC COOKERY.

Doctor: Persons who know not what they are talking about say the hygienist starves. The hygienist says, *knowingly*, he is *the* person who does *not* starve. Because he uses food capable of appropriation by the vital system, hence, nourishing and strengthening to the body, his force is expended in *using*, not in resisting or expelling, materials taken as food. As you have pencil and note-book at hand, I will give you a few cookery directions, recommending that you procure a copy of some good hygienic cook-book. "Health in the Household," by Dr. Dodds, is pre-eminently such a one.

Viola: Allow me to read this regarding the selection of foods. I find it in the Vegetarian Year-book for 1889:

"There are one or two mistakes that the tyro in food reform is very liable to fall into, and the most general one is, perhaps, the failure to arrange his dietary in accordance with the requirements of his system. It should be borne in mind that four kinds of food are necessary to man, and in order to simplify matters it will be best to put them rather crudely. Thus, there is the nitrogenous food required to build up the substance of the body and to repair waste; this is represented well by beans, pease, lentils, pea-nuts, and the whole pulse family, together with cheese and eggs. Then there are the carbo-hydrates, or starchy foods, required in order to maintain force and heat in the system. These are represented by grains and by roots and tubers, as the potato, also by sugar. Next follow the hydro-carbonaceous or oleaginous foods, which, like the starches, maintain heat and force, though to a far greater degree, and also probably give nourishment to the nervous structures and the brain. This class of food is represented chiefly by the oily fruits, such as olives, nuts of all kinds, and by oatmeal, maize, and many of the grains grown in more

northern latitudes. And lastly, there is the mineral food, which serves to build up the bones, teeth, and other structures; and is represented by the potash, magnesia, phosphorus, and other elements found in all vegetables and fruits, but chiefly in the husk of grain and in the skins of fruit, etc. These substances cannot be supplied to the system in their crude mineral form, but only from the vegetable world, and the taking of iron, potash, common salt, and phosphorus in that form is as absurd as it is injurious. The flesh of animals is very deficient in these mineral elements, and as will be judged from what has been said as to their place in fruits, vegetables, and grains, they are wasted in the preparation of fruit or potatoes, etc., by peeling, and in the manufacture of wheat into fine flour for the purpose of making white bread."

Doctor: There can be no rule laid down which will not admit of variation, but for persons of weak digestion the avoidance of variety at one meal is safe. Grains and fruits are a good combination, and one kind of fruit at a time. Vegetables are not so useful.

The best form of preparation for vegetables to be used by weak stomachs is in a

Vegetable Tea, or Soup.

In this way you secure all the salts and useful matters of the vegetable, and reject the crude fiber which is apt to tax digestion. Select about an equal number or quantity of all the crude vegetables, carrots, parsnips, potatoes, turnips, cabbage, beets, onions, celery, parsley, etc., slicing and cooking until done. Then pour all in a colander, and after draining mash the vegetables and put back the liquor. Pour this again in the colander, and the drained liquor forms "stock" for a soup, which only needs the addition of squares of toasted Graham bread, or some well-cooked barley, rice, or tapioca, to thicken it somewhat. Season light, heat again, and you have a good soup. Tomatoes are a great addition to this, or slices of lemon. This stock can be built upon to suit taste, and thus a good variety of dishes afforded.

Beans boiled done, without mashing or stirring, then the water, of which a generous supply was had, poured off, and used

as soup, with crackers or toast added, is nice. The beans can be served separately. Pease may be treated the same. The addition of a little butter or cream pleases the taste, and usually agrees with well people, just enough for seasoning.

There is such a variety of soup to be made from vegetables and grains, the inventive power of a good cook will ever find employment, and the digestive powers of the consumer not be unduly taxed by any of the simple, wholesome preparations. A dish of nice hot soup at the beginning of a meal is wholesome. It takes the place, largely, of gross vegetables. If the soup is a light one vegetables may be eaten at the same meal; if richer in variety of ingredients take no vegetables, but eat your plain corn bread, or dry toast, or Graham cracker with it. (This is not an exhaustive treatise upon soup.)

Vegetables should not be robbed of their nutritive salts by cooking in water which is afterward drained from them. This should be of such correct quantity that none would be left to throw away. Cook them "down in the pot." Let the excess of fluid evaporate, if necessary, during the latter part of the cooking process. The same is true of meats. One would die of "saline starvation," in the effort to subsist on food so deprived of its natural food elements.

Viola: Next, is

Nutrina.

It takes the place of beef-tea in all cases where the latter would be used, and makes a delicious dessert any time. I have it made thin sometimes, and serve it hot as a gruel. Then mixed with corn-meal gruel, about half of each, is a very palatable gruel food. Into three quarts of boiling water sprinkle and stir enough bran to make a thin gruel; boil about half an hour, and strain through a seine. Put the liquor back into the pot, and stir in enough sifted Graham flour to make it about as stiff as blanc-mange. The flour first to be wet in cold water and made into a smooth paste. Let this boil until the flour is well cooked, then pour into molds which have been previously wet in cold water. This may be eaten with a cream or a fruit dressing, as dessert. It is good with no dressing.

Julia: There is a variety of *mushes* which we ought to appreciate. When well cooked they afford delicious food. Corn-meal mush, made by wetting the quantity of meal you will use, and putting a spoonful at a time in the mush-kettle of boiling water until it is all stirred in, and free from lumps, then letting it boil in the kettle, closely covered, for two or three hours, is so different from what I ever saw before. It is thin almost as a gruel, and is so well cooked, not that stiff raw-tasted dish "of my childhood." It is delicate. And the wheaten mush made from "geroleum," the heart of the grain, which is obtained at the Roller Mills during some process of grinding. I forget the miller's name for it. This cooks very quickly, and is more palatable than cracked wheat. It should be made into a thin mush. Sometimes combined with corn mush or rye, it is very nice indeed. It also makes a nice gruel. And the rye mush, cooked well and molded, and Graham flour mush the same, add to the possibilities for simple dessert, eaten alone or with fruit sauce.

Viola: Fruit sauce may be made of the juice of any fruit, if too rich, add water, and wet a little corn-starch, adding this to the boiling juice, making it of suitable consistence for sauce. Sweeten to taste.

Julia: Another fruit dish. Take oranges or peaches, or such fruit as you have, cut in nice little pieces, and pour over this a sauce of clear corn-starch, thin and clear from having been boiled about twenty minutes. Sweeten. Berries are nice this way. Cooked fruits are often treated to a corn-starch thickening, just enough to give the syrup a consistency like rich fruit juice. Stewed gooseberries, cranberries, etc., are thus much improved. Also stewed pie-plant.

Doctor: "Bread is the staff of life." This is not new, but truer than we suppose before we know what bread is. To say this of the bleached, sour, doughy, yeasty thing misnamed bread, makes the proverb "null and void." But *bread*, little removed from the natural grain, *is* life-supporting. And this is made in some variety, and always palatable. Of wheaten bread, always the whole grain substance retained, we have

Gems.

Thirty years ago the dietist was almost invariably an invalid. It is not so now. Experience, placed in the strong currents of scientific inquiry, is blown into a blaze of light which reveals wonderful facts in human life. That food influences body, mind, and soul of the well equally as the sick, is now generally acknowledged, and interest is stimulated in the direction of suitable food preparations. Previous to the time named we had unleavened bread, made by pouring boiling water over wheat-meal and stirring as little as possible; the dough was hastily molded, and rolled out about half an inch in thickness, then cut into diamond-shaped cakes and baked quickly. There has never yet been invented a better bread than this.

Cold-water Bread

was made the same, only cold water used in place of hot, and the dough well worked and pounded. The cakes are always picked with a fork, to prevent blistering, and baked in a hot oven.

Viola: But what of gems?

Doctor: They are unleavened bread, only made into a batter. Take about a cup and a half of cold water, half cup of sweet-milk, and stir in flour enough to make batter stiff enough to smooth off when dropped into the well-oiled, *hot* iron pans. Let them stand a few moments on top of the stove, then put in the very hot oven and bake half an hour.

The first gems were called "drop bread," because the batter was dropped from the spoon on a baking-pan. When the idea of having individual cells for the cakes presented itself to a cook at Dr. Trall's Cure, in New York, she embodied it, and the patients at table named the new bread *gems*, saying, "We have *diamonds* already."

Corn Bread.

The *best* (invented by Miss A. J. Lamb) is made by taking about equal parts of well-cooked cold corn-meal mush, and stirring or mixing raw corn-meal with this mush; no added

wetting. A little experience will make it plain just how stiff it should be. Make it into a cake half an inch thick, on a *hot* oiled griddle. Cook until a nice brown crust is formed on the under side, when turn, and set where it will cook, but not burn. Bake from two to three hours.

Viola: Yeast bread should be removed in character very slightly from unleavened. Boil three potatoes, and pour the scalding water over a cup of white flour. Mash potatoes fine, and add to this. Cool, and put in a very small amount of yeast, about *one-fourth* the quantity given on any yeast package receipt. Place where this will rise. At night take warm water required for making the amount of bread, stir in the yeast, and knead well, ready for loaves. Set the dough in a place where it will rise, but not sour; in summer the cellar is suitable. Next morning early mold and put into pans, and your bread will be light and baked perhaps by breakfast time. It must not taste of yeast, or at all sour.

Doctor: One interested in learning will find it easy enough to compound dishes suited to the requirements of old and young, sick and well, while gustatory pleasure is at the same time greatly enhanced. Students and brain-workers, generally, should use only a very small portion of nitrogenous food. Whole meal and corn bread and fruit will be the best. All the fruits are good, but

Apples are King!

"It is stated that by a careful analysis it has been found that apples contain a larger amount of phosphorus, or brain food, than any other fruit or vegetable, and on this account they are very important to sedentary persons, who work their brain rather than their muscles. They also contain the acids which are needed every day, especially for sedentary persons, the action of whose liver is sluggish, to eliminate effete matter, which, if retained in the system, produces inaction of the brain, and, indeed, of the whole system, causing jaundice, sleepiness, scurvy, and troublesome diseases of the skin."

Julia: WHAT SHALL WE DRINK?

I asked myself the question, and said: We shall drink milk. I learned afterward (1) that milk is the scavenger of the cow's body, and will, to the extent of its power, take up and carry out any germs of disease consequent on unwholesome food or improper stabling; (2) that milk is an effective disinfectant; if set, for example, within reach of the emanations from a reeking pigsty, it will do its best to cleanse the surrounding atmosphere by absorbing its fill of odors. Public obligation to the lacteal fluid in these lines of usefulness is hardly appreciated.

That settles the matter for milk. Tea and coffee were shown to belong to the family of stimulants, and cannot nourish the system, but are capable of doing harm; and experience proves that a higher standard of health is maintained without their use than with them. They are first cousin to alcoholic drinks, the habit is akin to tobacco-using. Beer comes next, so highly recommended to weak women, and equally valued by them, to give strength and make fat and muscle. We will drink beer. But another side of the beer question presented itself.

Col. Green, president of the Connecticut Mutual Life Insurance Company, says:

"In one of our largest cities, containing a great population of beer-drinkers, I had occasion to note the deaths among a large group of persons whose habits, in their own eyes and in those of their friends and physicians, were temperate; but they were habitual users of beer. When the observation began they were, upon the average, something under middle age, and they were, of course, selected lives. For two or three years there was nothing very remarkable to be noted among this group. Presently death began to strike it; and, until it had dwindled to a fraction of its original proportions, the mortality in it was astounding in extent, and still more remarkable in the manifest identity of cause and mode. There was no mistaking it. The history was almost invariable—robust, apparent health, full muscles, a fair outside, increasing weight, florid faces; then a touch of cold, or a sniff of malaria, and instantly some acute disease, with almost invariably typhoid symptoms, was in vio-

lent action, and ten days or less ended it. It was as if the system had been kept fair outside, while within it was eaten to a shell, and at the first touch of disease there was utter collapse; every fiber was poisoned and weak. And this, in its main features, varying, of course, in degree, has been my observation in beer-drinking everywhere. It is peculiarly deceptive at first; it is thoroughly destructive at the last."

Then *water* modestly asserted its claim — not only cold water, but hot also. I found some one, in the *London Times*, had given an experience in the use of hot water as a beverage. Said he: "I and my wife have used it for years, not only as an aid to digestion, but to drink the last thing at night when the system feels a little out of order. Its effect on the system in the production of warmth is quite equal to that produced by the customary glass of hot 'toddy.' It is far more soothing than tea or cocoa, for it gives the digestive organs nothing to do, and one can rise in the morning entirely free from that feeling of depression which usually follows more powerful stimulants. It was the Duke of Wellington's favorite drink, both in the field and at home. It is, however, important that the water should be drunk hot, or else no one will try it a second time. Its greatest advantage is that, by adopting this mode of drinking water after being boiled, a great deal of the objection to water as a beverage, by reason of its possible impurities, is got rid of."

And then a New York doctor has just found out that drinking hot water is the best means of curing cholera infantum, a disease that carries off many thousands of babies every year. It is by no means a new remedy. Put hot water, as hot as you can hold your finger in, into the nursing bottle, and let the baby take it *ad libitum*. Most babies will drink liberal quantities with avidity. Water seems to be the drink provided by nature to answer her needs, and so we will not look farther for an answer to our question.

Viola: Have you ever told us how many meals a day one ought to eat?

Doctor: I am not sure that I have, but can give you my experience in a very few words. For the past six years I have lived on *one meal a day*, and find it so much more suited to every requirement of body and mind that I highly recommend

the plan to all who feel disposed to become rid of bondage to physical appetites. Your early morning thoughts do not drag you down to, What will I have for breakfast? All the forenoon brain and nerve and muscle are at the disposal of the *will*, and at dinner time you are *no more hungry*, you eat *no more food*, than when living upon two or three meals a day. Dr. Glass, now sixty years of age, and his wife have also lived on one meal a day the same length of time; and are delighted to find themselves in the best of condition, physically and mentally, though formerly Mrs. G was an invalid.

I have just received a leaflet from Dr. J. F. Sanborn on

Germinal Matter as Food.

He takes advanced grounds; I have not found anything like it in the books, but his position seems to have been reached through legitimate deductions. As you have the leaflet in hand, please give me an outline of its contents.

Viola: He begins by stating that matter occupies *four planes*. *First*, the lowest is chemical elements: carbon, hydrogen, oxygen, nitrogen. *Second*, chemical stable compounds: carbonic di-oxide, water, and ammonia. *Third*, vegetable proximate principles: starch, sugar, gluten, etc., examples. *Fourth*, and highest, the animal tissues: muscle and adipose tissue.

Doctor: Describe the cycle of matter in its "becoming" animal tissue.

Viola: It is from plane *Second*, as stable compounds, to plane *Third*, as vegetable proximate principles. From plane *Third* to plane *Fourth*, as animal tissues, muscle, nerve, etc.

Doctor: Is this as high as it can go?

Viola: Yes. From plane *Four* it may fall back to plane *Two*, where it started. This takes place in the decay of all vegetable and animal matter—of all organic matter.

Doctor: We learn that all matter, on becoming organized into either animal or vegetable structure, takes the form of cells: *from pre-existing living structure*, it receives its first impulse to life-motion. Now, does it not follow that the seed that is sown for the future crop has a life-force *within itself?*

Viola: Yes. And from this life-force life-motion is started in the plant wherever placed under favorable circumstances. In the animal kingdom the egg is the germ from which the future animal is to be started in life.

Doctor: What are the contents of the egg and of the seed called?

Viola: Germinal matter. The egg is neither bone, flesh, vein, nor artery, but it is that from which all these are formed. The grain of wheat is quite different from the roots, stalk, or leaves, yet they were started on their life-work by the life-force existing in the germ.

Doctor: In all cells, both vegetable and animal, there is the *nucleus*, out of which the tissues are organized, and the *external* part of the cell, that is, external to the nucleus, which is called *formed matter.* From what is this formed matter developed?

Viola: From the *bioplasm* in animal tissues, and *protoplasm* in vegetable cells. This formed matter was once germinal, either as bioplasm or protoplasm. It is hence a step farther in the cycle of development.

Doctor: How do cells multiply?

Viola: By division of the *nuclei* of pre-existing cells.

Doctor: How are all wounds in animal tissue healed?

Viola: By floating bioplasts, white blood globules, which are probably lymph and chyle corpuscles *in process of development* into red corpuscles. Out of these *new granulations* are formed. *A wound is never healed by formed matter of the cell walls.*

Doctor: That is very plain. The reason is, the formed matter is always farther on in its cycle of development than bioplasm, and *bioplasm* is essential to tissue building, whether in nourishing old cells or forming new ones.

Viola: Is there formed matter in vegetables and fruits and flesh used as food?

Doctor: Yes. "We also have in them the protoplasm and bioplasm which are not yet developed into tissue as formed matter. We have also seeds of vegetables and eggs of fowls that are nearly all germinal matter, that is, matter not yet developed into tissue."

Viola: Then, as there is a small proportion of formed matter in seeds and eggs, compared with vegetables proper and the flesh of animals, does it not follow that they are more nourishing as food?

Doctor: It does. And I will repeat that in both the animal and the vegetable kingdoms, matter becomes germinal, as bioplasm or protoplasm, before it becomes cell tissue, *because the formed matter is more advanced in the development than the germinal.* It is easy enough for the bioplasm in the animal cell to advance in its natural cycle to become organized into tissue as formed matter; but when the food is of formed matter, it has a weary, long, wandering way before it to become truly food, for it has to *go onward* in its course, has to decay so to become "stable compound," has to fall back from plane *Four* to plane *Two*, so as to start on its way again and become protoplasm or bioplasm, when it may advance into structure, formed matter. This is in accordance with nature's law of organic development.

Viola: Has the "formed matter" of our food no useful purpose to serve?

Doctor: Little, perhaps, beyond that of a mechanical use, as giving distention, and that is truly a use. "But food to be assimilated must consist of that represented by germinal matter, as seeds, nuts, the protoplasm of vegetables; and in the animal kingdom, by the egg, milk, and bioplastic matter. These are all on the upward and onward cycle of their development, and may become tissue; but all that is formed matter, after it has served its mechanical use, is rejected. The process of cooking does not necessarily impair the nourishing properties of germinal matter; fermentation and decay destroy all the life-giving properties.

Viola: Whole wheat is a pure germinal food. Contains all the elements in proper proportion. Cooked whole, the aroma is preserved, not lost in cracking or grinding. It is, indeed, a *perfect food*, giving all the tissues a chance to be nourished. It is very easily prepared. You get it from the miller, having it cleaned ready for grinding into flour. Wash it, and soak over night, then boil two or three hours, or longer, in water enough to cook it soft. It is easily masticated, and eaten with no sauce at all is very delicious. But, if preferred, fruit sauce, or milk, or cream may be used with it.

Doctor: This is, indeed, perfect food. It is clean, unfermented, easily obtained, easily cooked, gives the very *best* nutritive results. Pouring over the grain a superabundance of water in the cooking will furnish a delicious drink, a somewhat glutinous wheat-tea. For children and delicate adults this is extremely nourishing. Light seasoning of cream or sugar may be added, but it is *best* "just so."

CHAPTER XIX.

DIFFERENCE BETWEEN EXERCISE AND REMEDIAL MOTION, OR ACTIVE AND PASSIVE MOVEMENTS.

Julia: You frequently speak of *active* movements and of *passive* movements. Please tell me if there is any real difference, and, if there is, in what it consists?

Doctor: In the *active* movements the voluntary or will power is invoked, which always means expenditure of nerve-force. In ordinary exercise, like walking, working, playing, etc., large numbers of muscles are called into action through the stimulus of the will, and there must be a constant drain or demand upon nerve-force to sustain this effort. In a condition of health, where the nervous powers are equal to this demand, it is not only good for the whole organism, but one of the eminent means for sustaining the body in its highest vigor and strength. In the *passive* movements no exertion is made, but motion is *imparted* to the body through means of the operator's hand, or some mechanical device for that purpose. Here there is no expenditure of nerve-force.

Viola: Do these passive movements have any *psychical* influence?

Julia: *I* can answer that. Most certainly they have. Read in the doctor's case-book the interesting account of patients, who were so disagreeable and unfriendly, and even treacherous, becoming the most lovely persons in the house, after a course of treatment long enough to bring about some degree of health.

Doctor: The passive movements are truly of

PARAMOUNT IMPORTANCE

in effecting changes in mental as well as bodily habit. And why? Listen. There are functions natural to the mind, and

functions natural to the body. Whatever good effects come from passive motion come not by *changing these functions*, but by rousing the mental and bodily organs to normal activity, which is harmonious, healthful, happy. Motion is an *expression of life*, and influences every molecule of the system in a way which tends to overcome and remove the opposite—*death*. Interstitial changes are effected rapidly, the effete, worn-out, *dead* particles removed, so that there is opportunity for life to pervade the whole being. It is but displacing that which is not useful, and making room for the inflowing good. There is no higher, finer force in the universe than this

REMEDIAL MOTION.

The subject is capable of wide elaboration. The dynamical and chemical forces of the system being enlivened, every region feels the beneficial effects which arise from the *unity* of the organism.

Viola: Is there any weakening of any part in these massage or movement processes?

Doctor: Not any. The arousing influences are intended to and do promote *motion*, which, as before said, is an expression of life; which means health, strength, power—not disease, weakness, feebleness. The functions are impelled to activity, and the entire organism, as well as its component organs individually, gives response in good effects—elevating the bodily states to health and the mental to harmony.

Julia: In common exercise, then, we use what nerve-force is already at command, which you say is a good thing to do in well states; and do I understand rightly, that in disease we should confine ourselves not to the active, but to the passive movements?

Doctor: Yes. It is absolutely necessary that

SPECIFIC MOVEMENTS

alone should be employed by the sick or weakly, for above all things essential to recovery is the *sparing expenditure* of nerve-force in any and all directions. Even walking or horse-back riding cannot in many cases be afforded, for the reason that

the muscles called into action make constant and persistent demand upon nervous power.

Viola: I would like to have it stated just what acts specific movements are capable of performing in the system?

Doctor: Dr. Taylor says: "The essential feature of chronic disease may be expressed by the phrase,

FAILURE OF PUTTING THINGS TO USE."

If energy can be transmitted to the system from some source, no matter how derived, and that energy blend with the natural physiological functions, and aid in carrying them forward towards their destined states of *service*, that energy, which we may name specific motion, is able to produce increased manifestation of the chemical power of the vital system, which means *due elimination of waste material.* Linked with this fundamental process is the fact of defective muscular nutrition. This supports irregular and extreme activity of the nervous powers, because the nerves cannot contract as can the muscles, and move the blood along, securing new supplies of nutriment and removing their waste; so they remain in a bath of impure blood, and become irritated, which gives rise to *increase of nerve function*, consequently followed by increase of nerve nutrition.

Viola: Does not nerve function become impaired as rapidly as that of the muscles?

Julia: I would not think it worth while to answer such a question. Is it not evident? Have you not that fact in your own experience? Did you never have *pain*, yet were not able to hold up your head? And is not pain a kind of nerve work?

Viola: Ah! I now perceive that as the blood is not moved along by the muscles, and increased nerve action takes place, larger supplies of blood bring more nutrition to the nerves; so nervous energy becomes developed to a very *painful* degree, as it is excessive over muscular nutrition.

Julia: Yes; and that very pain invites more nutrition to the nerves and their great spinal centers, and soon actually prevents muscle-work, while muscular nutrition is the actual remedy for the condition which causes pain.

Doctor: You certainly have studied the subject intelligently, and will now at once understand how *passive motion* may be

made an equivalent for muscular work or activity, which would promote muscle-nutrition, hence be able to remove any form of morbid nervous action.

Another extremely desirable use of passive motion is in applying it to

PORTIONS OF THE ORGANISM

while other parts are left at rest. In cases of congestion or too much blood in the head, chest, spine, liver, stomach, or any part of the abdominal and pelvic region, the effects are very conspicuous. You apprehend how effective an impulse from any given point may be, where there is a circuitous flow like that of the blood in the body. The heart's function in giving impetus to the blood is an example. Suppose you would overcome a local blood stagnation, you would only need to give a sort of aid which would imitate a little heart impulse, and the blood would be impelled forward, thus removing the overburdened vessels in that locality.

Viola: Then, if a part has blood in insufficient amount, mechanical massage will divert the blood to that part, and at the same time remove any local congestion in other parts.

Doctor: It is not the mere improved distribution of blood that has such an important effect, but the increased use of it—carrying nutrition, promoting assimilation, and developing warmth and strength; the general tone of the system is restored; and because the statement is founded in truth, based on the laws of nature, *its effects are in all cases permanent.*

Viola: It is evident, then, from what we have learned, that this branch of the Healing Art cannot be laid aside with the simple statement that it is *nothing more than common exercise*, and any one can follow that. We have learned that

EXERCISE IS NOT REMEDIAL MOTION.

Julia: Also, that voluntary exercise exhausts nervous power, which is exactly the power lacking in the invalid, and when the system is in any way impaired it cannot *of itself* restore that power, and here the efficacy of mechanical movements is acknowledged.

CHAPTER XX.

MENTAL INFLUENCES.

Think health, and health will find you,
As certain as the day,
And pain will lag behind you,
And lose you on the way.

Think love, and love will meet you,
And go where'er you go,
And fate can no more treat you
Like some malicious foe.

Think joy, and joy will hear you,
For thoughts are always heard;
And it shall nestle near you,
Like some contented bird.

Whate'er your sad condition—
Whate'er your woes or pains—
Bright thoughts shall bring fruition
As surely as God reigns.

ELLA WHEELER WILCOX.

Doctor: This subject is one of extreme interest, for it involves matters which have influential bearing, not only upon medical practice, but upon the life of individuals; and these times demand of each the exercise of that divine right to know all that belongs to the questions which are being continually brought before the human mind. I would advise you first to understand thoroughly your own ignorance, the "ignorance of us all." Then to acknowledge the possibility of new discoveries, and to hold yourself in readiness to be lifted out of any notion which may have become well rooted and grounded in your thought. Let no hinderance stand in the way. Remember that in the vast fields of truth explorations are not yet so exhaustive as to assure us that present knowledge is absolute; there may be points of observation which our mental climbings have not attained. So do not seek to limit the possibilities of new discoveries; but rather unfetter the mind, loose the pinions of thought, and rise in the power of understanding far above and beyond the limits of the past, or, perhaps, the conceptions of the present.

With such a disposition towards to-day's study, let us consult the author before you, Tuke, in his work, "The Influence of the Mind upon the Body." Through what states does the

Mind Act Upon the Body?

Viola: "Through its threefold states of Intellect, Emotion, and Volition. The state of the Mind, comprising therein Intellect, Emotion, and Volition, exerts an enormous influence upon the body with which it is associated, including in this term all sensations, movements, and organic functions."

Doctor: You will understand clearly that the special senses are included under the terms Body and Mind. "Sensations (special and general) are treated of as being influenced by intellectual, emotional, volitional states."

Viola: The lesson before us, then, is designed to illustrate the truth of its importance, that the Mind, or brain influences, excite, pervert, or depress the nerves, and through them secure changes in Sensation, Muscular Contraction, Nutrition, and Secretion.

Doctor: Where there is such an amount of extremely valuable information as Dr. Tuke's book affords, it is a trial of one's discriminative powers to dwell upon what should be selected for our present purpose. We will follow in the order he has given, beginning with the Intellect. In his retrospective sketch he says: "Unzer and John Hunter were among the first to perceive clearly and express the mental or psycho-physical law which lies at the foundation of the principal phenomena properly comprised under the influence of the Intellect, or Thought, upon the body, including sensation as well as motion; especially in regard to the effects of Expectation, and what is ordinarily understood as the imagination. Thus Unzer, in his great work, published 1771, writes: 'Expectation of the action of a remedy often causes us to experience the results of its operation beforehand.' Hunter had his mind drawn to the subject of animal magnetism, and in his lectures on surgery (1786–'87, delivered a few years later than the appearance of Unzer's work in Germany) explained those which he witnessed on the principle of Attention and Expectation. He says: "I was asked to go

to be magnetized, but at first refused, because a spasm about my vital parts was very likely to be brought on by a state of mind anxious about any event, . . . and I feared lest it should be imputed to animal magnetism. But considering that if any person was affected by it, *it must be by the imagination being worked up by the attention to the part to be affected*, and thinking I could counteract this, I went. When the magnetizer began his operations, and informed me that I should first feel at the roots of my nails of that hand nearest the apparatus, *I fixed my attention on my great toe*, where I was wishing to have a fit of the gout; *and I am confident* that I can *fix my attention on any part until I have a sensation in that part.*' That was written nearly a century ago," says Tuke. "It really contains the gist of all that has been written since on the influence of Expectant Attention and Imagination."

Jahannes Müller (1838) says, "The ideas of a particular motion determines a current of nervous action towards the necessary muscles, and gives rise to the motion, independently of the will."

Viola: Müller expresses himself as decidedly as John Hunter in regard to the influence of Expectation. "It may be stated as a general fact, that any state of the body which is considered to be approaching, and which is expected with certain confidence and certainty of its occurrence, will be very prone to ensue as the mere result of that idea, if it do not lie beyond the bounds of possibility."

Dr. Braid, in 1841, threw a flood of light on the influence of the Mind upon the Body by investigations and experiments on quite an extensive scale. One sentence in his book contains the pith of the whole matter, as far as it relates to the influence of the Imagination or Expectation. "The oftener patients are hypnotized from association of ideas and habit, the more susceptible they become, and in this way they are liable to be affected *entirely through the Imagination.* But if they consider or imagine there is something doing (although they do not see it) from which they are to be affected, they *will become affected.* But, on the contrary, the most expert hypnotist in the world may exert all his endeavors in vain if the party does not expect it, and mentally and bodily comply, and thus yield to it."

Doctor: "Glancing broadly," concludes Tuke, "at the whole range of psycho-physical phenomena, it is clear that it would be taking a very contracted view of the relations between Mind and Body, if we do not include in this relationship a reference to the inseparable *nexus* existing between the two, arising out of the fact that the organ of the mind is the outgrowth and ultimate development of the tissues and organs of which the body itself is composed; that it not only unites them in one common bond, but is, in truth, a microcosm of the whole. It is a fine expression of Swedenborg that the likeness or image of the greatest is represented in the least as in a mirror, and of the least in the greatest; and he adds, 'nor can anything be turned over *in the mind* that, if it please, may not be portrayed *in the extremes* by means of the fibers; for instance, inaction of the muscles. There is a

LIKENESS OF THE BRAIN

in every fiber. The fibers carry with them the animus of the brain. Cerebrum aud cerebellum are universally present in the body by means of the fibers.' By a very different route, he arrives at a conclusion which does not materially differ from the modern school of physiologists. 'If, then, the development of the minutest corpuscles of the body be a representation of the same principle that works in the formation of the organ of mind, if this organ consist of and be an outgrowth from such corpuscles, and if the brain be the grand center which is in immediate relation with the structures and tissues which have preceded it, then, although these continue to have their own action, which they had before the brain was added, or have in animal life, where no nervous system exists, that organ, one of whose functions is centralization, combination, or co-ordination, must be expected to act on the Muscular Tissue, whether striped or unstriped, the Organic Function, and upon the Nervous System itself.'"

Viola: Of the various mental states comprised under the intellect, "Imagination is a complex mental power of the greatest importance, and must be considered under this section, although passing insensibly into emotional states." Ruskin

says: "It is the grandest mechanical power that the human intelligence possesses, and one which will appear more and more marvelous the longer we consider it." It is an operation of the mind altogether inexplicable, and can be compared only to chemical affinity. From a practical medical standpoint Fancy and Imagination are to be used synonymously.

Doctor: What is the basis of the Imagination?

Viola: "Simple imaging; the fundamental element is a psychical representative image. We are concerned with Ideas which the mind conceives, and which may or may not be actual copies of reproductions of external objects. As sensation may be intensified by various favoring circumstances, so, also, may ideation or imaging acquire intensity from Attention, Desire, Faith, etc., and then we have Imagination in its complex, as distinguished from its pure and simple form of imagining."

Doctor: How is the intensity of ideas increased?

Viola: By the Belief, Faith, or Expectation that certain phenomena will occur, and powerfully affect the body for good or ill, according as it is associated with Hope or Fear. Indeed Hope is usually involved in medical Faith; Fear is not. Both are frequently allied with

Expectation and Belief.

Doctor: What is Expectation?

Viola: It is a belief in the future; if of a favorable character, it constitutes Hope; if unfavorable, Fear. Hope and Fear, according to Wundt, are special forms of Expectation, containing an element of the indeterminate. Hope is the expectation of a wished-for event; Fear, the expectation of one not wished for. It is an apt description of his, that Expectation is the hurrying forward of the thoughts into the future. There may be the expectation of a muscular movement, or of a sensation, or that certain organic changes in the direction of health or disease will occur. As the influence of ideas is so largely determined by their hopeful or fearful character, the emotional element will constantly crop up in the consideration of the Imagination, just as under the head of emotional influence, the lustration of the effects of Fear must also represent Expecta-

tion, seeing that Fear is the apprehension of evil. Bain, who defines the primordial form of belief, as expectation of some more contingent future about to follow on an action, holds that James Mill erred, in common with most metaphysicians, in calling it a purely intellectual state. On the other hand, the distinctive character of the belief, from an intellectual point of view, must not be lost sight of, for it is not simply that a fearful belief will affect the bodily functions, but that the expectation of the form which it will take will determine more or less definitely the particular character of the affection. When Belief is intense, we say there is Confidence; Doubt is excluded, and Faith is all-powerful. The imagination has risen from a mere idea, image, or conception to an irresistible conviction, the very mental conviction which, from a medico-psychological point of view, is the desideratum in undertaking the treatment of diseases admitting of amelioration from a psychical method.

Doctor: The old French Commission on Magnetism observed: "As to the Imagination, we know the derangement which a vivid and sudden impression has often occasioned in the human machinery. The Imagination renews or suspends the animal functions; it animates by Hope, or freezes by Fear; in a single night it turns the hair white; in a moment it restores the use of the limbs or the speech; it destroys or develops the germs of disease cells; it even causes death." Now we come to Sympathy and Imitation.

Viola: "Sympathy refers to feeling, Imitation to action. There is the sympathy with both forms of feeling, mental and the sensational. The influence upon sensation of a mind *en rapport* with another mind illustrates both effects. One who sympathizes strongly with another who is suffering from bodily pain, is very likely to experience it himself. The emotional element enters strongly into this condition, but there may be what is termed sympathetic pain, when the knowledge, abstract idea, or conception is alone sufficient to induce corresponding bodily sensations without any excitement of emotional sympathy. At this point it really merges into Imitation. For with both it is this knowledge or apprehension of another's state, which, more or less involuntarily, causes similar actions, as expression,

gesture, and the tone of voice. A vivid imagination image of a phenomenon occurring to another is formed in the mind. This is reproduced in the spectator. The event is in accordance with the general law now under consideration. If John gapes when he sees Thomas gape, it is because the idea is forcibly presented to his mind, and thus produces analogous acts. The idea is in this case excited by the sense of sight or of hearing; but it may be suggested in other ways, as when John simply thinks of the act and the same effect is produced, as has happened to myself from writing this sentence. Here we meet the additional principle, that whatever mental or bodily state can be excited through the senses from without may rise from within, from imagination proper. All these sympathies come into play when we only imagine ourselves acting on the stage of life, as well as when we are really doing so. It is this principle, well known to psychologists, but so often overlooked by the public, which continually turns upon the consideration of the questions now engaging our attention; and both principles united serve to form a clew to many otherwise inexplicable bodily manifestations, the effects of mental states. Imitation is closely allied with phenomena properly referred to the imagination, with those astonishing psychological dramas which have, at various epochs, arrested the attention of the world."

Doctor: As regards the Imagination and Imitation, the former combines old forms until new ones arise, even if it does not create; the latter faculty does not invent, it only copies. They bear, in this aspect, the same relation to each other that the painter and the engraver do. Both are essential to the well-being of the individual and of the community. Without Imagination the world would be a desert, devoid of even its mirage; a barren present without future hopes. Without Imagination the lover and the poet, according to a high authority, could not exist. Without Imitation the acts of daily life, known as "habits," originating in unconscious mimicry and heredity, would be fresh inventions or discoveries in each individual. From our present practical standpoint, however, Imitation is rather the result of an idea excited by sensorial impressions or the imagination. It involves a reflection, or bodily counterpart, of a mental image. On the Influence of

the Intellect on Sensations, our author says: "The intellect may excite ordinary sensation, which, in addition, may be either excessive or diminished, while it may also induce perverted sensation, which may become painful. The terse, but comprehensive, expression of John Hunter, which has already been cited, contains in a nutshell the principle that underlies the greater part of the phenomena referred to in this lesson. *I am confident that I could fix my attention to any part until I have a sensation in that part.*"

Müller expresses the

Influence of the Ideational

upon the sensational center in equally clear terms. "Ideas do not act merely on the motor apparatus by which they are expressed; they as frequently affect the organs of sense, which then present sensorial impressions or images of the ideas."

Proofs are plentiful in every one's experience. Who has not shuddered at the thought of biting a woolen thread, passing a nail over a rough surface, cutting of glass with a sharp instrument, the passing of a sleigh-runner over gravel, and many other like things. If twenty persons direct their attention to their little fingers for five or ten minutes, the result will be something like this: a few will be unconscious of any sensation in this member; some will experience decided sensations —aching, pain, throbbing, etc.; and the majority will feel a slight sense of weight and tingling. This simple experiment raises several questions, but we believe there is real effect produced upon the fingers if the thought is directed sufficiently long to it, and that these vascular changes are felt in the form of throbbing, weight, etc.

Where Sensation is excessive. It is unnecessary to do more under this head than to refer, in illustration, to the notorious fact that an expectation of the pain, as an actual blow on any part of the body, greatly intensifies it. It is, in short, the converse of the other truth, that pain is not felt, or only slightly felt, when attention is directed into a different channel.

Diminished Sensation.

Insensibility to bodily pain, artificially induced without drugs, and solely by psychical means, is a most interesting and important fact, and would require a chapter instead of a few paragraphs to do it justice. The simplest example of anæsthesia due to intellectual conditions occurs when the Attention is so powerfully arrested in a certain channel that the application of a painful stimulus to the body is not observed. The writer was on one occasion about to have a tooth extracted under the influence of laughing gas, when, in consequence of a casualty, the dentist was unable to administer it. Extraction was, therefore, performed without it, but the operation was rendered almost painless by the writer vividly imagining pleasant ideas, and mentally repeating to himself, "How delightful! How delightful."

Perverted Sensation.

"The individual under the influence of Braidism, persuaded that he is in danger of being lost in snow, shivers with imaginary, but to him, no less real cold." We may say that Shakspeare would be "surprised to learn" that a man might be able to hold a fire in his hand, and yet fancy himself cold by thinking of the frosty coppices, and conversely might be able without feeling chilly to

> "Wallow naked in December's snow,
> By thinking on fantastic summer's heat."

Viola: It is related here that Mr. Braid, in investigating the alleged discoveries of Reichenbach in regard to the old farce, found in nearly all cases, even when the persons had not been hypnotized, slowly drawing a magnet or other object from the wrist to the point of the fingers produced various effects. Among them were a "change of temperature, tingling, creeping, pricking," which when he reversed the motion, "was generally followed by a change of symptoms, *from the*

Altered Current of Ideas

then suggested."

Doctor: We know that the thought of anything which actually sets the teeth on edge may cause sensations of discom-

fort. My cook could never eat a peach unless it first had the skin removed; she could not even peel peaches to prepare them for the table. The skins suggested to her the thought of biting a piece of woolen cloth, and was distressing. As to actual pain caused by mental states, Sympathy, Expectation, etc., familiar instances are numerous. In obstetric practice I have frequently met with attendant friends and nurses who suffered labor pain in sympathy with the patient; and in a few cases the husband suffered a "fellow-feeling," which might be called sympathy! One of my sisters died of cancer of the breast, and I never think of her in her last illness that a darting, shooting pain is not immediately felt in the exact locality of the part which was affected in her. Any one can recall instances in proof of these effects.

Sensation from association of ideas in accordance with the law of contiguity is aboundingly illustrated. I once passed through the fire in a burning building, barely escaping alive. Some weeks after, when walking along the street in usual good health, I smelled the smoke from burning shavings in a shop near by and suddenly dropped, faint and motionless. Ever since a disagreeable feeling of faintness comes over me whenever I think of smoke from burning pine.

We must pass over much that is of interest upon the Influence of the Mind upon the Senses, and will merely observe that "attention to the various processes of secretion and nutrition, not only excites their activity, but is accompanied with more or less of definite feeling." "Attention directed to the stomach notably causes a sensation of weight, aggravating or even originating dyspepsia; discomfort, a sense of tension, and other forms of sensation may be induced in the several abdominal organs, as every one knows from experience."

Viola: The influence of the Intellect upon the voluntary muscles is extremely irritating. From that wonderful fellow-feeling established by nature between mind and mind, body and body, or between the various parts of the mental and bodily constitution of the individual, Imagination, "sending electrical thrills through every nerve of the body," stirs the whole being to its depths through the operation of sympathy. The nearest stations being in communication with the most distant

outposts, and the frame changing now with its own, and now with another's condition, as reflected in its own chambers of imagery. The influence of Attention pure and simple upon the voluntary muscles (usually muscular sensations) is not so striking as some other mental states. In truth, as regards the voluntary muscles, it almost requires the guiding influence of an expectant idea to induce any well-marked action. Simple attention to the finger or the foot seems, however, to render it difficult to keep it motionless. A certain fidgetiness is begotten in the muscles of the part.

Doctor: The influence of the intellect may cause spasms and convulsions. It has been pointed out by many medical writers, that the mere mention of water will in a hydrophobic person induce the recurrence of the symptoms. The image in the imagination causes the same effect as the attempt to swallow water. A young lady patient under my care would have spasms whenever she was allowed to play certain pieces of music, which she had learned with much difficulty, through severe mental application. Temporary loss of muscular power is induced through the simple belief or conviction that a muscle cannot be contracted or relaxed. Instances of this are not rare.

Viola: The Intellect acts upon the heart and involuntary muscles with a power similar to that which it exercises over the voluntary muscles.

THE DIRECTION OF THOUGHT

to the heart has, very generally, an embarrassing influence upon its regular action. It is true, emotional states exercise a much greater and more instant influence; but simple attention to its beats is usually attended by slight, and occasionally by painful, cardiac disturbance. The action of an intellectual as distinct from an emotional state is referred to by Sir H. Holland. "There is cause to believe the action of the heart is quickened, or otherwise disturbed, by merely centering the consciousness upon it, without any emotion or anxiety. On occasions, when its beats are audible, observation will give proof of this, or the physician can very often infer it while feeling the pulse. And where there is liability to irregular pulsation, such action is seemingly brought on, or increased, by the effort of attention,

even though no obvious emotion be present." Medical students often suffer from disturbed action of the heart when their thoughts are directed to this organ by their studies.

Doctor: The Functions of Respiration are so closely connected with the heart that the influence of the Intellect upon the lungs may be referred to here, as is well expressed by Wilkinson: "The breath awaits while the steady fingering thought explores, and then inspires, not whatever comes, but precise information. Let the reader observe himself when he is feeling for such information, and he will find his curiosity rejoicing in periods of suspended lungs. . . . We hear best in breathless attention, and see most observantly when the eye-thought gazes unshaken and unprompted by the lungs. It is also to be noticed that the voice, which consists of perceptions freed from the mind and launched into the air, is made of the material of the expirations. The mind is breathed out into the social world by the expirations and their pauses, and not by the inspirations. . . . The imagination, which is the intellect of the passions, builds especial houses in the breath, or, as it is said, forms air castles; these are its own explorations, in which it revels, for what it draws in is nothing to it, but what it breathes out is all. It does not, however, expire either to do or to die, but to run after its breaths as they sail through the air; not desiring to leave the world, but to propagate its image children in the universal imagery." The same writer makes some observations on the relations between the exercise of thought and respiration, which are true to nature. "Thought is still, and contemplation breathless; each involving, first, fixed breath, and, second, a small expiring; and so on, until the thought is traversed or the effort ends and begins in you. . . . To the senses, suspended animation is suspended consciousness; to the intellect, suspended animation may be life, thought, and supreme wakefulness. . . . Intellect touches so near upon trance, that the highest cases of either involve common phenomena and exist in the same persons."

Viola: Sir Henry Holland observes that he has reason to think that "hemorrhage is often increased by attention, but whether by excitement of the heart's action or by direct influence on the vessels of the part cannot be easily decided.

Concentrated attention, moreover, will frequently give a local sense of arterial pulsation where not previously felt, and create or augment those singing and rushing noises in the ears, which probably depend on the circulation through the capillary vessels."

Doctor: The influence of the imagination upon the alimentary canal is often illustrated. The thought of disagreeable cathartics will sometimes produce effects similar to those produced by the drug. Cases of nausea and vomiting are also illustrations. I have known persons to vomit at sight of the tumbler which had contained medicine.

Viola: The intellect may powerfully excite, modify, or suspend the organic functions, causing changes in nutrition, secretion, and excretion, and thereby affect the development and maintenance of the body. Illustration of the influence of ideas on secretion will readily occur to any one.

Doctor: Unzer expresses the truth very clearly. "Many glands pour out their secretions from imaginations. The mental image or idea must, of course, be in relation to the secreting organs." The salivary glands are notably affected by ideas. Also the influence of attention upon the mammary glands is well recognized. The secretion of gastric juice is increased by the idea of eating, as proved by experiments on dogs and men with gastric fistula. The secretion of the liver is also thus affected. Thought acts upon the secretory functions of the skin, kidneys, and the intestinal glands.

Viola: Influence of the emotions upon sensation may be such as to excite ordinary sensation, and this may be excessive or diminished, also perverted, and even powerful. However difficult it may be to free an emotion from its intellectual accompaniment, certain mental states are comparatively emotionless. We have seen that a vivid idea definitely directed to a certain locality may, without generating any emotion, induce a sensation. If an unimpassioned thought can thus effect sensation, how much more profoundly will an intense emotion of fear or of joy effect it? Says Bain: "For securing attention to a limited subject, the feeling of terror is highly efficacious. Anxiety causes innumerable organic sensations—qualm in the stomach, not actual nausea, but the well-known indescribable

sensation referred to the pit of the stomach, the epigastric center; also equally marked sensations in the legs, hands, etc. Milton speaks of the "qualms of heart-sick agony."

Doctor: In regard to

EPIGASTRIC SENSATIONS,

there has always been a tendency to connect the deepest feelings of the soul with this region or the umbilicus. To this spot a monk in the eleventh century directs the thoughts to be turned, in order to arrive at the highest degree of mental insight. "When thou art alone in thy cell," says he, "shut thy door and seat thyself in a corner; raise thy mind above all things vain and transitory; recline thy beard and chin on thy breast; turn thy eyes and thoughts towards the middle of the abdomen and search the place of the heart, the seat of the soul. At first, all will be dark and comfortless; but if thou persevere day and night thou wilt feel ineffable joy, and no sooner has the soul discovered the place of the heart, than it is involved in a mystic and etherial light."

Gibbon, in quoting the passage, characterizes the light as the production of a distempered fancy, the creature of an empty stomach and an empty brain. Shakspeare recognizes the influence of unhappy feelings on the sensations of the alimentary canal, in the passage in which Iago says:

> "The thought whereof
> Doth, like a poisonous mineral, gnaw my inwards."

Taylor says, in his "Early History of Mankind," that "at the Berlin Deaf and Dumb Institution, they push the forefinger against the pit of the stomach to express 'I'; that at the Edinburgh institutions they indicate their desire or will by placing the hand on the stomach, in accordance with a natural and wide-spread theory that desire and passion are located there."

Viola: We speak of the *sickening* details of a crime, a *sickening* scene, and it is acknowledged that the poisonous influence of these, if aggravated, will produce actual vomiting. "Hope deferred maketh the heart *sick*."

> "I feel such sharp dissention in my breast,
> Such fierce alarums both of hope and fear,
> As I am *sick* with working of my thoughts."

Emotion may excite sensation to an excessive degree, as in hypochondriasis, which, Romberg says, "can only be said to exist if the mind create new sensations, which, in their turn, give rise to nutritive derangements. . . . The mind is productive, it creates corporeal sensations and changes; the imagination clings to its own productions, and attaches itself to a given group of sensory nerves."

The special direction of thought to one part may cause anxiety, or anxiety may induce a person to direct his thoughts to operations of the bodily functions. It is doubtless true that the anxious reflection upon any of the bodily sensations increases them to a morbid extent, and may originate a host of imaginary disorders.

The Influence of Emotion on the Voluntary Muscles.

Doctor: We now hastily gather a few bits of information regarding the influence of emotion upon the voluntary muscles. Where is the ordinary influence of emotion upon the muscles most marked?

Viola: Upon the face, "the Dyall of the affections." Ruskin says: "There is not any virtue, the exercise of which, even momentarily, will not impress a new fairness upon the features, neither on them only, but the whole body."

Doctor: What is the effect of joy?

Viola: It excites the whole muscular system, producing, when excessive, laughter, rapid motions of limbs, dancing, running, leaping, throwing the arms about, and clapping or rubbing the hands.

Doctor: How different the effects of grief! In the early stage, acute pain induces wringing of the hands, grinding the teeth, tearing the hair, sobbing, groaning. Later, grief induces feeble respiratory movements and sighing, and produces on all the muscles effects, natural results, which have been felt to such a degree as to exhaust the system.

Viola: Fear, if it does not proceed so far in the direction of terror as to paralyze the muscles, induces rapid muscular action in the form of flight, while it fixes and contracts the parts of the body in the instinctive attempt to conceal, and,

as it were, diminish their size. Says Spencer: "Fear, when strong, expresses itself in cries, in efforts to escape, in palpitation, in trembling, and these are just the manifestations that go along with the natural suffering of the evil feared."

"He answered naught at all; but adding new
Feare to his amazement, staring wide
With stony eyes and hartlesse hollow hew,
Astonisht stood, as one who had aspyed
Infurnall furies with their chains untyde."

Doctor: So, through the whole family of the Emotions, Terror, Suspicion, Courage, Calmness, Anger, Love, and Hate, etc., "the whole body is a tongue."

In concluding our lesson, we are very certain that the emotions do not act exclusively upon any one organ. As any emotion may act upon any organ, it is not surprising that the same emotion may induce different diseases, and *vice versa;* but this is not inconsistent with the position that the same emotion may, under the same circumstances, aid in producing the same disease. Of these conditions one is the temperament or diathesis of the subject of emotional excitement, another is the presence of actual disease in an organ.

Viola: Most surely, and yet certain emotions, as fear, affect the action of the heart in all, both in health and disease. From this wonderful, timely book of Dr. Tuke's we have gathered treasures here and there which will be bright rays of light in illuminative power where there is so much that is dark or misty. In his preface, Dr. Tuke fitly quotes from Browning:

"To shoot a beam into the dark, assists;
To make that beam do fuller service, spread,
And utilize such bounty to the height,
That assists also."

Doctor:

THE HEALING POWER OF THOUGHT

is fast becoming recognized as an important medical factor, and will yet take a leading position in the practice of the healing art.

Rev. C. H. Mann adds to the abundance of beautiful and useful words written upon this subject, by many enlightened and spiritually-minded men and women, these extremely useful lines:

"Healing from some spiritual cause and healing by means of the ordinary processes of nature must be in their essence identical. Both are the effects of the powers of life. Both are from the Lord. A method of healing must be regarded as normal and natural in order to be tolerated; must be considered simply as a means for procuring richer and more abundant supplies of life's forces for the healing of the body." Remedial agents "are really useful" when "of such a character as to give true forces opportunities to work in certain useful ways." "The true doctrine places the health-giving power of spiritual forces in all that we do. It recognizes the Lord as the Giver and the Source of blessing in everything that we receive. It looks to Him to respond to our desires, as we, trusting Him, *may exercise thought and the powers He has given us* to accomplish the purposes we believe He approves. The true doctrine does not recognize the Lord as being any less present, or any less really the source of our health and of our success in life, when these come to us in an ordinary life of healthful trust in Him, and of orderly service of the neighbor in a profession, than when by seeming miracle we are made well, and when in unexpected ways the wants of our body are supplied. A healthful application of the laws of spiritual cure leads one away from the thought of physical disease. Such a one takes his health as he breathes the air, accepting it as the necessary accompaniment of the Lord's presence, receiving it as a child in his father's household receives the necessities of life. The spiritual man should receive health from the Lord with every inspiration of his breath, with every act of his body, in the ordinary and common-place things of his life's work, ignoring disease, turning his back upon it without giving it a thought, letting the Divine Father care for it in accordance with the laws of His infinite power. It is not necessary for such a one to bring it into the center of his thoughts, to invoke the divine care especially to it, and to place his conception of it upon a banner to bear before him. He who receives spiritual health from the Lord in a healthful and true way, repudiates the thought of an exceptional divine presence in his soul, but glories in his union with all humanity in partaking of the infinite stream of health-giving power which flows from the

divine throne. The true doctrine upon this subject also acknowledges the presence of the Lord as something belonging to every one. It does not require an agent to bring it to you. It comes in the efforts of the regenerate life of each, as, looking to the Lord for all things, he forgets himself, and in personal identification with all men, like a simple child, he breathes the disease-destroying atmosphere of the divine presence.

"Every human being in his inmost self is joined directly to the common Father of all, from whom, in infinite abundance, come pouring forth life and health. As each enters the right state for it, will open the doors which the Lord has made within him for the admission of that life, and through them, in copious abundance, there will descend into him a spiritual power bringing all peace to his soul, and a natural power bringing all health to his body.

"How transcendently important it is, then, if we would be blessed with that healing of the body which the powers of spiritual life can bring us, that we recognize the reality and the power of spiritual things, that we refuse to give material forces control over us by believing in them, that we come under the dominion of the great flowing river of life and of strength, which comes down through Heaven and the spiritual world, into our souls, from the Lord. The very existence of the material universe is as dependent on the spiritual universe as the shadow is dependent on the light that casts it. And yet we turn our backs upon the infinite power and reality within, and resolutely fix our eyes upon the shadow, giving it our allegiance, having faith in it, trusting it, and worshiping it; thus, by the very action of our thoughts in reference to it, closing our souls to the current of the descending actual life from above. We must, then, if we would receive the true benefit in the health of our bodies which can come from the spiritual power of Heaven, believe in that power. We must accept the doctrine that in spiritual life is all true life, that in spiritual power is the only power, and that in spiritual reality is the only substance.

"The mind-cure advocates are right in exalting the soul over the body. They are right in affirming the substantial

reality of spiritual things, and the unreality of natural things. They are right in making the spiritual world the world of causes, the natural world the world of effects from those causes. They are right in appealing to spiritual forces to effect the removal of natural diseases; and they are right, in general, in advocating a life of repose and trust to the powers of spiritual life to accomplish all things for them, to remove their disabilities, and to bestow upon them all necessary power. And this one thing they have added to the cause of spiritual healing: they have demonstrated the practical ability of mental conditions to control physical conditions and to do away with physical infirmities. They have demonstrated the practical power of the soul over the body; and this not as a theory, but as a practical method of life, bringing health and comfort to those who choose to take advantage of it. Among the many external things that may be observed, I will notice, first, that making one's ailments prominent in his thoughts and conversation is injurious to the health-giving power of the spiritual forces. If, in your conversation, you treat the sicknesses with which you are afflicted as though they were really enemies of your body, possessing an actual self-existent nature, you thereby give them a hold upon you which they would otherwise not possess. To be continually looking to the ill feelings of your body, always examining your pulse, as it were, forever thinking of this ache or that discomfort, analyzing all the strange or peculiar sensations that may come to you, and discussing such matters with others, all such conduct gives a basis in your mind for the presence of the evil spirits who aggravate and maintain your ailments. Such methods of thought and conversation are among the things that most do hinder the presence and the efficiency of the health-giving influx of Heaven. Yet it seems as if the dominant habits of polite society made such topics as these the leading subjects of anxious inquiry and discussion. It is the very method, in the law of spiritual doctrine, that will most successfully fasten disease upon us, and make the spiritual cure of our sicknesses impossible. This may appear like a trifling, external thing, but it is an important element in the law of cure by spiritual forces. It is useful to cultivate a habit of healthful thought and conversation. As we

avoid the sicknesses of life as our subjects of consideration, we not only refuse them a spiritual beginning, but we therefore give to the health-producing powers of spiritual life a grasp upon us which will be effective in producing and maintaining good health.

"A second external habit of life, which is most closely allied to this first, will naturally suggest itself to all. It is indulging in a false sympathy for our friends. We can be sympathetic for a sufferer in a way that will aggravate his pain. We may be sympathetic in a way that will help his recovery. It is not necessary for me to say which is the true sympathy and which is the false sympathy. If one were to go to an injured man, tear the bandage from the part that was hurt, start the stanched blood to flowing again, and cause the pain to be renewed, he would be regarded as wickedly cruel. But not less really cruel is that unkind love and sympathy which brings so prominently into thought and conversation the sicknesses of your friends in the expression of your sympathy for them, that the difficulties are aggravated and the patient made worse. No sympathy for a sick friend is kind that does not help him to be better. And all sympathy that aggravates his ailments, though expressed in the most loving terms and affectionate tones of voice, is surely cruel. Let our association with each other be healthful. Our conversation, the thoughts we cherish, the sphere of our affections should go forth to help all with whom we are associated, to strengthen them against sickness, to weaken the hold of the disease-producing causes of the other world upon them. Such sympathy, though in its true form it may not be replete with sentiment as is the false sympathy I have referred to, has the divine love within it, and makes the visits of him who can give it like the coming of an angel of Heaven."

CHAPTER XXI.

IMPORTANT PRINCIPLES FOR WOMAN TO UNDERSTAND.

Doctor: Ah, you have about hid yourself behind a stack of books this morning. You expect thus to obtain clear and well-defined ideas as to the nature of disease and the *modus operandi* of remedies?

Viola: I have not only taken all these books down from the shelves, and placed them here for convenient reference, but have worked faithfully ever since our last conversation, and hoped to find something before meeting you to-day.

Doctor: Find what? Something concerning the subjects I mentioned? Did you learn what disease is? Tell me what you have gathered from the books.

Viola: Very little that is definite or satisfactory. There is much difference of opinion, and various theories seem built on mere opinion. The medical authors seem substantially to agree on one point—that very little is known as to the nature of disease. Prof. S. D. Gross says: "Of the essence of disease very little is known—indeed, nothing at all." And so on. I have marked a list of like expressions; shall I read them to you?

Doctor: That is not necessary; but surely you find some definite doctrine taught by the various schools of medicine. Consult your authors, and tell me, from their doctrines and practices, what you would think disease to be. Wait, you may also draw your answer from observation. Judging from the popular methods of cure, of means employed to eradicate or palliate disease as it presents itself in phases almost without limit, *what is disease?*

Viola: It is an entity. A lawless something. It wars against the vital organism, is unfriendly to the interests of the

domain it invades. Seats itself, or is seated, wherever it seems disposed, on some vital organ or less important structure. Takes itself up, wanders about from one locality to another, and sits down again, whenever and wherever it pleases. Is of a very bad, malignant disposition, sometimes; again, is quite mild and amiable. It has about a thousand names. Nosologists have classified and named about a thousand manifestations of this diabolical Something—whatever it is. It is an enemy, and must be so regarded and so ministered unto.

Doctor: Accepting your definition, what of necessity should be the attitude of remedies employed?

Viola: Warlike. "An eye for an eye, a tooth for a tooth." Poison for poison. Drive out the intruder, suppress, destroy, break up generally. Find out if you can what organ is sat down on, and with whip and lash rout it thence; chase after it into every tissue and cell of the body, wherever it dares to show its head. Gather all the missiles—there is one for every appearance of disease—and shoot straight at the symptom. If you do not hit it first, try again, and again, for surely there is virtue in the weapon if you can only find the right one for the particular occasion. I have seen persons take half a dozen different kinds of medicine under the belief that if one did not cure another might. It is doubtless this thought which leads in the matter of popular remedies, for those containing the greatest number and variety of ingredients are most acceptable. Dr. J. J. Garth Wilkinson says: "Instead of the bows and arrows of the old Esculapians, we have rifled cannon of prescription. With good aim, it would be very well if the diseases were out of the patients and could be shot down at a distance from them, but the diseases are in the patients; thus the patients strew the battle-fields, and their diseases are kept alive in their posterity. But the mouth is no longer the only spot invaded. The whole body in its skin, which is meant to individualize the man and to be a castle of safety, is made into a mouth for the reception of poisons, and gapes with wounds to let them in. Injections of toxical substances into the cellular tissue, and so into the blood and lymph, is a practice extending more and more every year. Diseases and their victims are

and crave it with a drunkard's eagerness. This evil practice is established in spite of and in defiance of all reason. Think of the proposition to inject foulness, only a little foulness, to do you good."

Julia: I think it is wickedly cruel of your profession to treat the people so. No wonder the patent-medicine man is so generally patronized. I see now it is all owing to the teaching and practices of the regular doctors, that he has such opportunity to delude and deprave the people.

Doctor: I confess to the truth of your accusation. Here is another truth in the matter. It is not usually, if ever, the case that a time-honored, powerful organization takes the lead in seeking out its own evils and weaknesses, and in abandoning them. That kind of growth and resistless inquiry comes from without the fully matured and satisfied body. This principle pervades human society and government. It is really a law, and, if understood by you, would lead to more charitable judgment of the profession.

But to your definition of disease. It is a clear one, consistent with what you have read and observed. The question arises, however, is it a true one? Please pay close attention while I give you a definition of disease. It is important to have a sure foundation at the beginning. It is a common fault to mistake the causes of disease for the disease itself.

Disease is an action, not an entity, and is governed by law. It is indeed a war, but a war against morbific causes. This war is carried on, not by an intruding enemy, but by the vital powers within the system attacking substances which have no harmony with or rightful relation to the living organism.

Dr. Trall says: "*Disease is an effort to rid the system of noxious matter, or to repair damages. It is a process of purification. It should not be subdued, nor killed, nor cured, nor destroyed, but regulated and directed.*" This commotion, disturbance, disquietude naturally tends toward health, is governed by a law of nature, which, as Dr. Evans says, "is only the uniform mode through which the divine power acts."

Viola: Allow me to read you this paragraph from Dr. Evans: "A state of health is a condition of wholeness, entireness, completeness, and the word holy is from the same root. In what does this entireness, wholeness consist? The animating principle of the body is what we call, interchangeably, the soul, the mind, the spirit. There is a law of correspondence, of correlation, between the inner man, the living soul, and the external organism, or the latter answers to the former as a shadow to the substance, an echo to the original sound, and an effect to a producing cause.

"When the correspondence between the two departments of our complex existence is complete, the body is pervaded in every part and without obstruction by the spiritual principle. This is a state of wholeness or health. When the spiritual essence does not harmoniously pervade every part, there is something wanting in that part. It is no longer complete or whole. The effort, the *conatus*, the spontaneous and inherent endeavor, the unconscious struggle of the soul to restore the partially sundered correspondence, is a state of unrest, of disquietude, of disturbance, expressed by the word, disease—without ease."

Dr. J. H. Dewey, in "Christian Theosophy," says: "Disease we will define as a disturbed or damaged condition of vital action, to which all physical organisms, whether of plant, animal, or man, are liable under abnormal conditions, and which in animals and men often causes great suffering and distress. To remove the disturbance and restore the balance of harmony in the vital processes, is to remove the disease and restore the health of the sufferer. There is an inherent tendency in the principle of life in all organisms, whether of plant, animal, or man, spontaneously to react against the disturbance, recover the lost balance, and in case of injury to the organs or tissues, either from disease or accident, to heal and restore the injured parts. This takes place in plants, the same precisely as in animals and man, and therefore is independent of mental action one way or the other. It is the spontaneous and automatic action of the healing function of life itself."

Again, "there is but

and that is lodged in the life of the individual. This power may be disturbed and the normal action prevented by various influences and conditions; and, by the operation of the same law, it may be quickened and reinforced by the appropriate influences and conditions."

We now come to the *modus operandi* of remedies.

Doctor: That will do. You see by this time that your definition of disease would be rather unsatisfactory, to say the least.

Viola: I do. But, excuse me, is not yours revolutionary? From what I learn, you would accord to the living tissue all the action and life, and not admit the action of drugs, calling them inert, dead matter. On the other hand, the drug is said to act upon the vital system or upon the disease. Each practices according to his own theory.

Doctor: Of course. The hygienist recognizes in disease an action that is friendly. He takes the hint, and assists in removing the cause. From this view the one who administers the poison in order to kill the disease only adds a burden, and does not aid the living organism.

Viola: If disease is a repairing process tending toward health, why not allow it to run its course unchecked?

Doctor: That is better than to throw obstacles in the way. But you must understand that the vital instincts must be held subject to intelligence, and that is about all that can be done in any disease under any condition. Regulate and guide the direction of the vital instincts. This is a fundamental rule. Balance circulation.

Viola: But do not drugs act chemically on vital tissue?

Doctor: Chemical action takes place only after vitality has departed. The drug would have to unite with the tissue, so as to form a new compound. Take a poison into the stomach. Does it act chemically? Does it unite with the stomach and form another substance? Or, does the vital power resident there arouse itself to resist its presence? That is vital, not chemical, action.

Viola: If, then, drugs do not act upon the vital system, how is it with food? Does not that act to give strength and nourish the various tissues?

Doctor: It is with food exactly as with medicine.

The Stomach Acts.

Useless matters taken with the food are rejected by the vital powers, as are the waste products of the system. It is not less reasonable to conclude that the using power is as much vital as the refusing or rejecting power.

Viola: Have patience with me, doctor; but what are we to understand when a delicate invalid gains strength under the use of a tonic. The whole system is energized by it. Does not the medicine act in that instance, and has not the strength of the living structure been thereby enhanced?

Doctor: It is the same "oft-repeated story" of vital resistance. The generous and vigorous action of the living domain, in its effort to expel what it cannot use, looks like added vital power. Tonics are no exception. They call out vital resistance more slowly than do stimulants, hence their "effect" is said to be more lasting. But it is only extravagant and wasteful application of vital power, for if the amount of force called out were expended in normal channels the strength would be truly increased; then no reaction from excessive action follows. For a good illustration of vital action on the defensive, please read what W. V. Hardy says of a blister:

Viola: "Upon the application of heat and certain poisons, serum is thrown out to protect the surface—quickly, if the vital power is strong; slowly, if it is weak; and not at all if life is extinct. If the fluid were drawn out by the blister, it would make no distinction between the living and the dead person. It would destroy the tissues after life was extinct; just as any foreign power could rule in any part of our land, after the authority of the present government had been destroyed. It makes the same difference which theory is true that it would whether you received money as a gift or as a loan with fifty per cent. interest. If poison acts upon the system beneficially, then it is a boon; but if the effect observed

is vital action aroused to expel the poison, then the apparent benefit is a loan with heavy interest." Allow me to read the whole page?

Doctor: Do. It is a lesson in a few words.

Viola: "We turn to the practical test of judging these opposite theories by their fruits. One teaches that stimulants and condiments are indispensable; the other, that food alone is useful. Nature kindly guards us from harm by diminishing the enjoyment as we approach excess. Thus food, which at first is palatable, becomes insipid. Exercise, which at first gives pleasure, becomes weariness. Wakefulness is succeeded by desire for sleep; and everywhere this law protects us from harm until

FLATTERING STIMULANTS

step in and give us appetite for the otherwise unpalatable food, goad on the energies of the weary, and banish the desire for sleep, giving unrestricted license for excess in every department of our nature. Before us lie two roads: one, with the guiding light of nature wisely given by our Creator, to protect us from every possible danger; the other, with the danger call of stimulated sensation, leads on to perverted appetites and excited impulses—downward into the clutches of the demons intemperance and sensuality. Stimulation is sailing the voyage of life without chart or compass. The temperate use of any evil is a practical failure. Excess will certainly follow. If we sow to the wind we shall reap the whirlwind. The belief that stimulants are useful is the foundation of their almost universal use. If we consider them good in disease, and bad only in excessive quantities, with no rule to guide, no uniform practice among their advocates in relation to their use, we are seeding for the resulting harvest of intemperance. Contrast this uncertainty with the simple truth, food alone is useful. Just as in the construction of fabrics we seek only for suitable material, not using cotton in making plows, nor steel in weaving calico. Stimulants are as foreign to the use of the body as cotton is to the plow."

Doctor: You now perceive the difference between the two theories of disease, and what the effect of each must be upon its application to practice.

Prof. Willard Parker, M. D., says: "Of all sciences medicine is the most uncertain." Prof. E. H. Davis, M. D., of the New York Medical College: "The *modus operandi* of medicines is still a very obscure subject. We know that they operate, but exactly *how* they operate is entirely unknown." Prof. Chas. D. Meigs, M. D., of the Jefferson Medical College, Philadelphia, Pa., says: "All of our cogitations respecting the *modus operandi* of medicines are purely empirical." Prof. Joseph M. Smith, M. D., of the New York College of Physicians and Surgeons: "All medicines which enter the circulation poison the blood in the same manner as do the poisons which produce disease." Benjamin Rush, M. D., says: "I am incessantly led to make an apology for the instability of the theories and practice of physic. Those physicians generally become the most eminent who have most thoroughly emancipated themselves from the tyranny of the schools of medicine. Dissections daily convince us of our ignorance of disease, and cause us to blush at our prescriptions. What mischief have we not done under the belief of false facts and false theories? We have assisted in multiplying diseases; we have done more, we have increased their fatality."

Viola: How different the clear ringing tones which formulated this definition: "*Disease is not an enemy at war with the vital powers, but a remedial effort, a process of purification and reparation. It is not a thing to be destroyed, subdued, or suppressed, but an action to be regulated and directed.*"

HYGIEO-THERAPY KNOWS

that in their relations to each other *living* matter is *active*, and that *dead*, inert matter is *passive*.

Doctor: Yes. Shakspeare, in "Henry IV.," says:

> "Within a ken our army lies;
> Upon mine honor, all too confident
> To give admittance to a thought of fear."

Or doubt. "All the unsettled humors of the land" are marshaled forces bearing witness to this simple truth. Every truth in the universe is in harmony with every other truth, and what is founded in a law of nature is self-evidently true.

Viola: I now understand that the *vital system acts*, not the dead, inert matter of drugs. But what of the special or elective affinity—a preference which the drug is said to exercise? How do you account for that?

Doctor: I will answer you in the words of the immortal Dr. Trall: "Instead of there being an affinity particular, special, elective, or selective between an inorganic drug and a vital organ, the truth is the reverse. The relation is that of absolute and

ETERNAL ANTAGONISM.

It is repugnance and aversion, instead of affinity." And the action, too, is all on the other side. "The *living system acts* on the drugs, instead of the drugs on the living system. And this is true of all remedial agents. It is also as true of food and hygienic agencies as it is of medicines or poisons. *The living system acts.* It acts on food and normal agents—on things useful or usable—to digest and appropriate them. It acts on drugs, medicines, or poisons—on things not useful or usable—to resist and expel them. Whatever is convertible into its own substance the system appropriates—uses. Whatever is not so transformable it rejects. When a person takes ipecac, antimony, or lobelia into the stomach the drug is soon ejected. The process by which it is expelled is termed vomiting. Is vomiting an action of the stomach or an action of the drug? Poison is cast out; stomach remains. Which acted on the other? We are told that the drug first acts on the stomach, makes an impression on it, irritates it, etc., and then the stomach responds, acts, or reacts on the drug. This proposition involves the unparalleled absurdity that a dead, inorganic, inert substance has, in itself, a power to act, a property of life, and even an intelligence, or at least an instinct; for it chooses, 'elects' or 'selects,' the place in which and the part whereon it will act! Again, it is said that the drug may act mechanically, in virtue of the form, size, shape, or arrangement of its molecular particles; or chemically, because of the affinity of its elements with the constituents of the organic structures. Mechanical action relates only to the position or motion of bodies in obedience to the law of gravitation. This law affects all mat-

ter alike, living or dead, so that mechanical action, as between the dead and living organism, is a misnomer or impossibility. And chemical action means simply the combination and separation of the particles or elements of inorganic matter. There is no chemical affinity or action between dead and living matter, and no relation except that of repulsion."

Viola: But some medicines are emetics, some cathartics, etc. Will you please explain this?

Doctor: "The living organism rejects and expels poisons, as best it can, under all circumstances. Some it can best eject by vomiting; we may call these emetics. But do not let us mistake the sound for the sense, and suppose that *they act upon the stomach.* They are emetics, *because the stomach acts*, vigorously and promptly, *on them.* Other drugs, medicines, or poisons can best be expelled through the bowels. We may call them cathartics or purgatives. Other agents can be, with least wear and tear, got rid of through the skin or kidneys, and we call them diaphoretics or diuretics. Others are determined to the surface with a degree of vigor and energy which increases the arterial circulation and the superficial heat, and we may denominate them stimulants and tonics; while others are resisted so intensely in the first passage that the action is determined from the surface to the center, rendering the skin cold and pale, and the brain depressed or stupefied; and we may call them antiphlogistics and narcotics. But still let us not be deceived by words. The medicines produce certain effects. But how? Their presence occasions vital action to get rid of them, just as a thief in your domicile of a dark night would cause you to act so as to eject him through whatever door, window, or other outlet you found most convenient."

"Why the presence of certain substances introduced within the vital domain occasions certain methods of resistance, which we name emesis, catharsis, etc., we may not be able to understand, but we do know that

THE VITAL SYSTEM ACTS,

and inert matter is acted upon, whenever and under whatever circumstances they are brought into contact.

"He only can be the true physician who can see God's providence, heaven's order, and nature's law in all circumstances, vicissitudes, and phenomena of human existence."

"That, changed through all, is yet in all the same."

CHAPTER XXII.

BRONCHITIS.

Physicians of any considerable experience know that this insidious, stealthily-approaching malady is not "the cause of itself," but the result of constitutional disorder which has been neglected, overlooked, or badly managed. Wherever nutrition is defective, the strength waning, appetite capricious, functional duties of the organs tardily performed, if at all, and a tired look and feeling pervading the system, *there* is good soil for consumption and bronchitis. Cough is an early symptom usually. A "nervous cough" or "stomach cough" is not of itself a very important disorder, but it is a sign of morbid sympathy becoming established between the stomach and lungs, and *may* prove serious. There are two reasons why this sympathy exists between the digestive organs and the bronchia and the lungs: one is, the same mucous surface which lines the stomach also extends through them; the other, the same system of nerves prevails in each. Hence, irritations excited in the stomach are conveyed by the branches of the ganglionic nerves to the windpipe, and the respiratory muscles and nerves are prompted by this irritation into a "convulsion of cough."

Viola: I suppose anything which renders the stomach irritable induces this cough. *Mental emotions* often excite it; because the stomach is evidently first affected by such influences, and then the lungs through sympathy.

Doctor: But so long as bad digestion and assimilation are persistent there is no safety, even if the cough is at times relieved. When the cough merges into expectoration, with symptoms of having "taken cold," it is become bronchial; the mucous membrane of the bronchial tubes is implicated. The more frequent and prolonged these attacks are, and that is their manner of progress, the inflammation creeps down the air tubes, and finally takes permanent hold of the mucous mem-

brane, when *chronic bronchitis* is fixed. The digestive symptoms are very commonly overlooked, and even denied, because there is ability to eat enormously sometimes, as in nervous dyspepsia; but *chronic bronchitis* is *always* established and supported by *imperfect digestion and assimilation.*

Julia: May not a person have a cold in the head, and even in the chest, and it all pass off without any further trouble?

Doctor: Yes. But if the stomach continues in disorder the "cold" will reappear again and again until it does become chronic. The medicine usually taken for the cough adds to the indigestion, and thus increases the mischief it is intended to abate. Perhaps years of this fruitless endeavor are spent, acting on a denial of stomach derangement, and the complications drive the case into hopelessness. The cough becomes more frequent, expectoration varies, all the evils and torments of liver disease and dyspepsia put together concentrate here; and yet the patient declares the stomach is sound, any sort of food can be digested; and surely there seems reason to believe large quantities are needed, there is such lack of strength.

Viola: Is bronchitis curable? I do not see what you would do for it, but on the principle of bringing the digestive organs into healthy conditions.

Doctor: Exactly; that is all those air tubes need.

Reduce Stomach Irritation,

and then the source of morbid sympathies is cut off. In such a case I would advise the patient who undertakes self-cure to have regard entirely to nutrition. This includes about what would be done for dyspepsia in the way of food. Mechanical massage, if possible, should be applied; if not, do the next best. I now recall a case treated after it had run the course of ordinary treatment and travel for years. Please give it from the case-book.

Julia: "Mr. R—— inherited bronchial consumption; all his family, except the father, now dead, and *he* is dying of 'old-fashioned consumption,' which has lasted nearly twenty years. Patient, about thirty-eight; light complexion, tall, thin, stoop-shouldered, weak. Is very hoarse, coughs and expectorates

profusely; has irregular chills, night sweats, sore throat, fever. Good appetite at times, and indulgence in eating to satisfy appetite excites cough. Pulse, 110. In fact, the house patients judge me unwise to attempt cure in this case, and some have urged me to decline it; but a few days will decide correctly what is best to do. Mechanical massage given to extremities every morning. Fomentation over liver and stomach for an hour following. Compress well covered with dry flannel, worn over stomach and liver, from three o'clock until bed-time each day. Free drinking of hot water; two meals a day of grains and fruit exclusively, and *very sparingly*. At bed-time the wet girdle from arm-pits to thighs applied. Sunshine and pure air and *rest*. Treatment was changed as the case grew better, and pretty vigorous voluntary motion was added. Pulse at the end of two weeks, 74. Hoarseness better, no chills that were noticeable, but slight fever, improvement in digestion, as bowels were not now dependent on enema. In six weeks patient went home on business, expecting to return, but continued so to improve that home treatment completely answered the desired purpose. The same 'rigid,' but very acceptable, diet was observed. We sent him Graham crackers by the box. The gain in flesh was delayed for some months, but as all the functions were restored and the local affection gave way, marked increase in weight was observed, and several pounds were added weekly for a time."

Doctor: This case, cured six years ago, has never relapsed, and the "constitutional taint" *need* never be reproduced. Yes, bronchitis *is* curable, but not always cured. To such cases, under home-care, I would say: live on grains and fruit, two meals a day, and only enough, not too much. Hot water may be taken in sips at any time, and full drinking before breakfast one hour, and the same time previous to dinner, making a full supper on hot water alone. Twice daily, at regular hours, apply fomentation to the stomach and liver half an hour each time. Removing the fomenter, sponge the surface in cool water and rub very thoroughly; squeeze and press the liver and abdomen. Gently strike the liver with the side of the hand a moment or so. Breathe deeply, arms stretched up over the head, while lying on the back.

Live out of doors ; take

No Exhaustive Exercise ;

but a light kind of labor; light gardening, for instance, is good, as both mind and body are employed and interested. Wear flannels the year through; silk next the skin and flannels over this is preferable, but the flannel alone is sufficient where silk is not liked. The skin must be prompted to action by dry rubbings morning and night, and at least two general soap and towel baths each week.

The delightful air-bath may be combined with dry rubbing, if the surface is briskly acted upon and there is not too much enfeebleness. A change of flannels worn next the skin should be made at least twice a week. Night-clothes the same. Much relief is had in fomenting the throat and chest, which may be done at bed-time for forty minutes or so, after which apply a compress wrung from cold water and covered abundantly with dry flannel. This to be worn every night, and when removed next morning sponge the surface in cold water, rubbing well and drying with towel.

Mucilaginous fluids, as flax-seed tea, with lemon, are found soothing in these bronchial coughs and not harmful. There is constipation and often piles complicating the disorder ; enema, after morning fomentation, clearing the bowels, may be taken, and usually a small one, a gill of cool water, may afterwards be introduced to remain.

There is such a variety of conditions to meet, and yet pretty uniform treatment will answer for all, though a degree of adaptation to individual cases must be observed.

Keep in mind that whatever restores nutrition lays the enemy low. Voluntary movements of the trunk should be daily practiced, perhaps before time for fomenting.

1. Sitting on a stool, place hands on the sides, and bend the body forward and back slowly ; counting about five at first, but this may be increased to twenty or more.
2. Bend slowly from side to side, counting.
3. Now diagonally to the right, counting the same.
4. Diagonally to the left. Rest a few moments.

5. Hands clasped on top of head, *twist* the body each way *slowly*, as far as possible, about five times. Rest.

6. Sit on a bench which is so high as to allow the feet to escape the floor. Clasp the hands over the head, swing the feet back and forth vigorously. After resting, repeat this; grasping the bench at the edge with each hand, and bearing steadily on the hands, almost lifting the body.

7. Lie flat, arms stretched, inhale slowly and exhale slowly —several times. The last two or three times may be followed by patting the chest while the lungs are held inflated. This may not be practicable always, as cough is sometimes thus troublesome.

8. Knead abdomen.

9. Gradually accustom yourself to hang by the hands. At first bear only a portion of the weight, and increase the demand on your arms until the weight can not only be borne, but the body drawn up even several inches from the floor. Rest an hour or so after this.

Uterine complications are often present in bronchitis, as also in the more direct lung disease.

The general treatment here indicated will be sufficient to meet these in most cases. Local symptoms of these complications will yield as the system grows towards improved states.

If these are severe, congestion, displacement, or any form of mismenstruation, treat as directed for these disorders, modifying, not adding to that already given.

Do not talk much. Avoid mental excitement, pleasurable or painful. Waste no energy. Do not cough, control it. Understand there is no remedial power in what you *do*, or *apply*, or *take*. You only act in *obedience* to the command, "Cease to do evil," when you "learn to do well," to remove obstructions which prevent the inflow of life and its manifestation in your body. There is a universe of life and health. Why are *you* enfeebled for lack of this? Why, when you darken your windows, are you shut out from the beautiful sunlight? Does God arbitrarily shut the light and warmth of His sun from *you?* Or, have *you* closed the shutters and hung up the curtains? Remove these obstructions, then, if you would enjoy and be helped by the inpouring sun ray. This is for you to do. *Trust God for the rest.* Yes, TRUST HIM.

CHAPTER XXIII.

PULMONARY CONSUMPTION.

Doctor: It would be absurd enough for us to take up the study of this affection with reference to obtaining anything of practical use to those who are looked upon as incurably diseased, did we not *know* that such views are incorrect, because based upon false premises. Mark, I do not say all cases of consumption are curable. But some are. And while making ourselves acquainted with its supporting factors, much will be gained in the knowledge of what to withhold and how. So consumption is liable to be undermined, left unsupported, and as it cannot be sustained under such circumstances, will be *prevented*, or taken hold of in its incipiency, which is next best, and greatly in advance of the neglect which leads to despair.

Dr. Watson says: "Phthisis, you know, means a wasting away or consuming; but of late years it has been restricted to that *species* of wasting disease which consists in the occupation of the lungs by tubercular matter, and the changes which that matter *suffers* and *works*. But it would be an error to suppose that the disease is restricted to the *lungs* in these cases. The lung disease would be sufficient at length to destroy life, but its mortal tendency is aided and accelerated by *disease situated in other organs*." "The *pulmonary* consumption, as Dr. Latham justly observes, is no more than a *fragment* of a great constitutional malady. But that malady plays its part most conspicuously in the lungs."

"You ought to be aware," he says in another place, "although the facts as yet possess no practical value, that the stomach is often much enlarged and thinned in those who die of consumption, and that the liver is very apt to undergo remarkable changes; it becomes enlarged, and there are two varieties of the enlargement. In one it becomes full of fatty matter, and this is called 'fatty liver.' It is more common in

women than in men. The other kind of enlargement is called 'waxy liver,' or, because of its resemblance to bacon, '*lardaceous* liver.' Both these forms of hepatic derangement proceed insidiously, with little or no pain or tenderness," etc.

Viola: Why do these "*facts possess as yet no practical value*"? Here surely is a case of morbid nutrition, and dates *right from the stomach and liver*, the digestive organs. These facts would seem eminently practical to one who accepts the views presented by these authors and others of like eminence. Is it possible that the fallacy of localizing "cause and effect" upon the lungs so interposes between theory and popular practice, that remedial attempts are circumscribed to the affected locality and not directed to all vulnerable parts? Is it wonder, then, consumption *is not cured?*

Doctor: And not prevented. Know this fact. "Tubercle is never deposited unless there has been and is disordered assimilation of food,

IMPERFECTLY-FORMED BLOOD

as a consequence of that, and, besides these, sympathetic irritation radiating from the center of nutrition to the lungs. *There never yet was tubercular deposit with a sound digestion.*" (Dr. Gully.) Surely these facts have a highly practical value for persons who are suspected to have the inherited taint or acquired tendency to consumption or bronchitis. Digestion being considered, all its conditions will be taken into account—quantity and quality of food supplied, times and manner of eating, kinds and amount of exercise, the bearing of dress, social habits, employment, mental states, and whatever affects the expression of vital power. Whatever enfeebles this expression is surely not calculated to prevent that infirmity of the digestive organs which permits the deposit of tubercular matter. Blood-making is not advanced by begging the stomach to digest food, or spurring it with stimulants, medicinal tonics, or whatever may induce an artificial energy, which at best is only temporary and followed by increased exhaustion. Both the "primary" and "secondary" nutritive organs require attention, and when these are considered as two digestive processes, interrelated so that the imperfections of one affect the functional integrity of

the other, it is plain enough what to do. The stomach will be supplied with good food, and in quantity enough, no more, to be changed into *good* chyle ; the lungs would be incited to action through changes effected in the muscles by a suitable and proper amount of exercise, always knowing that both in the stomach and lungs there is a permanent irritation which is liable to be intensified by *overtaxation*, or overworking either of these organs. This irritation of these *digestive centers* would be diminished, and digestion or assimilation carried on in remote parts by means of applied power if necessary, thus insuring better blood, better circulated and distributed throughout the organic domain, instead of having it remain congested in the lungs and digestive organs.

INCREASE BREATHING CAPACITY AND DIGESTIVE POWER,

and consumptive tendencies will be inert. Incipient consumption is thus made *curable*, and the fatal event of advanced consumption may be postponed indefinitely. Even if there is tubercle in the lung, it is rendered harmless by keeping the tissues surrounding it uninflamed ; and no knowing how many years it may remain so under proper care of the general health. This tuberculous matter is sometimes absorbed, as, Dr. Wood says, "is shown by dissection." "And if the diathesis be so far subdued *as to prevent the deposition of other tubercles*, the disease may be said to be cured." Even after the formation of a cavity, the reduction of congestion and return of functional power to the organs holds the case unaffected to any serious degree by the imperfect lung.

Dr. Wood, in his "Practice of Medicine," mentions two cases which occurred to medical men of Philadelphia. One of the patients was affected, when a young man, with all the symptoms of phthisis, including frequent attacks of hemorrhage, severe cough, hectic fever, etc., from which he completely recovered, and continued exempt up to the time of his death, which occurred many years afterward of typhoid fever. "The other was my preceptor and friend, the late Dr. Joseph Parrish, who in early life labored for a time under symptoms of phthisis, and after his death, at an advanced age, was found to

have several cicatrices of the upper part of one lung, which were obviously the remains of tuberculous cavities." "The probabilities are," he continues, "that each tubercle has a tendency towards health, and, if alone, would in time end in perfect recovery; so that the great fatality in phthisis consists in the *continued predisposition* which causes the constant or frequently repeated deposition of other tubercles."

Julia: Does he not mean by "each tubercle having a tendency towards health," that the vital powers of the organism are constantly endeavoring to overcome difficulties in the way of their control, and the tendency toward health is in the vitality resident in every normal tissue, not in an abnormal deposit?

Viola: This "continued predisposition" to tubercular deposit would be good rather than evil in its effects if every "tubercle had a tendency toward health." The more tubercles the more health.

Doctor: Arresting the process by which these tubercles are formed is the rational, natural, and successful method of prevention, cure, and prolongation of life. Twenty-four years ago a case of apparent tubercular consumption was placed under my care. The young girl of eighteen was taken ill at boarding-school a year or so previous, and continuing to decline under the medical care provided at this school, was taken home to afford experiment for numerous doctors in her own and other cities. At last her physicians advised the parents to travel, and make her as comfortable as possible; the case could not be cured. By the advice of friends, who, as subsequent events proved, "builded even better than they knew," the "course of travel" was towards our Cure. She was so weak the journey was necessarily made at intervals, perhaps a day at a time, and rest between. I was young then, enthusiastic, and not rich in experience; subsequently, such a folorn case would have been very cautiously received, if undertaken at all. As the innocence of the child is that of ignorance, and the innocence of the adult that of wisdom, so the confidence which then inspired my efforts was that of youth and lack of that wisdom which comes only through experience. To-day I would accept the medical care of just such a case with no less enthusiasm,

but the years have brought lessons drawn from observation, careful study, and abundant experience, elevating confidence to the region of

INTELLIGENT FAITH.

This faith, akin to wisdom, brought to bear upon diseased states, renders the hope of recovery eminently more certain. The natural methods employed, as preparatory of the way for vital influences to rule and reign over the organic kingdom, are known as God-established means, or paths, through which the "prodigal" may return "to his Father's house, where there is enough and to spare." Am I digressing? You may read the outline of this case as it is recorded.

Viola: "Miss J. C——, only child of wealthy parents, who have surrounded her with every means of becoming ruined in health—petted, pampered, coddled. With no reference to the needs of the system, the appetite from babyhood has been tempted and sated with delicacies, sweets, and rich concentrated foods at any and all times when at home; at school, the regular express package, containing fruit-cake and goodies, supplied what was withheld at the table, and when the bewildered digestive organs gave way, they were tortured with iron and the whole line of tonics, until cough and consumption followed. Corsets, early adopted as an essential part of the dress, are snugly drawn to support (?) the weakened muscular structures of the trunk; patient rebels at suggestion of their removal. There is cough, expectoration of streaked bloody matter, chill, hectic fever, sweats. Skin pale, lips burning red, voice feeble and husky, pulse 100 plus, emaciation, weakness even to inability to walk more than a little about her room or the parlors.

What is to be done? First, I will have the clothing so arranged there shall be freedom of motion in every muscle, and an evenly distributed circulation. Then, just enough good food, and abundant *rest* for the digestive organs. The skin brought into activity. Pure atmospheric food for the lungs. A *call* for food, not from the irritated stomach, but from every tissue of the body, will be made in response to passive exercises which must be administered. Soon as she is able, I will have her walk; at first a short distance, and increase with added

strength. I believe the case can be cured, for have we not correct principles to guide us? Understanding these, why fail?

Julia: I think there are a good many reasons for failure of even correct methods; there are conditions in cases sometimes entirely beyond your reach. But you had not learned that, had you?

Doctor: It seems *that* case was not to teach me the lesson, for from the first few days a constant improvement was seen in all the symptoms. A gymnastic suit was worn in place of the usual dress; food restricted to grain and fruit; life in the open air; rambling over hills as soon as strength would permit; daily treatment, which "told" on symptoms; all combined with cheerful, hopeful companionship, brought the case in twelve weeks where she could walk half a mile before breakfast; and at the end of another twelve weeks returned to her home; ailments, gone to stay. She married, moved west, bore several children, lived an active, useful life up to the time of her death, which occurred about four years since, of some acute disease. She gave no inheritance of consumption to her children, and was not herself consumptive afterwards.

Viola: Allow me to read another case of seventeen years ago. M. H—— came to my office—indeed, was brought, for she could not walk any distance. Case so hopeless I could only defer positive acceptance, promising to call at her home, which I did same day. An eminent physician, who accompanied me and aided in examination of the case, pronounced it useless to try, and in this opinion I fully concurred. The mother was importunate; *begged* me to take the case, and finally so wrought upon my sympathies, I promised to make the effort to make the patient more comfortable, which I knew it was in my power to accomplish. My medical friend presented to me the certainty of my being accredited the honor of killing the case when she died, and I meekly bore my prospective dignity. However, he visited the case with me for several succeeding days, curious, perhaps, to see how far comfortable a dying case can be made, and yet fall short of recovery.

Julia: Oh, I thought you did not agree with those who look upon mere palliation, "smoothing the pathway to the grave," as admissible, but always to treat a case as possessing the *possibilities* of recovery, at least.

Doctor: That is true. The difference is in what you do to palliate. If you employ death-dealing instruments results must be accordingly; but if your measures, which look to present relief, *also* favor every possible chance for ultimate recovery, do you not see how entirely applicable they are? In this case, which was one apparently advanced in the last stages of consumption, even to swelling of limbs and feet, diarrhœa, etc., palliation laid sure foundation for cure. In about two months the patient was able to take a trip on the boat, as the weather was midsummer, and in a few weeks more was dismissed from direct medical care. She is married, lives in St. Louis, and calls on me occasionally to reiterate her thanks for what was done. She has had continued exemption from this disease.

This incident occurred while she was under treatment. After she was able to walk about town, she met on the street a physician of a neighboring town, who attended her among the last employed previous to calling on me. Delighted to see the old doctor who had dismissed her as incurable, and to show him the improvement made since then, she accosted him. He stared at her, as much as to say, "Why do you?" and perceiving herself unrecognized, she said, "I am M. H." "Oh, no," he replied, "M. H. is dead. I knew she could not live three weeks when I last saw her." "But I am the *identical* M. H., and am getting well," said she. "Good heavens!" he exclaimed, excitedly; "is it you? Why, what has wrought such a change? Take me right to your physician's office; I must see that doctor," etc. "That doctor" was only a very humble agent, wielding a power freely bestowed upon each and all who will sit at the feet of Nature and learn of her. And what does Nature say of those whose tendencies are consumptive, and of those already confirmed? I think we have already learned that

Good Health is the Best Prophylactic

in this as in other disorders. Whatever accomplishes its attainment and permanence of well-balanced physical and mental force subverts the approach of this dreaded destroyer. "Colds" must not be neglected; sore throat, catarrh of the head, throat,

or any portion of the internal mucous surface must not remain. These conditions can be easily removed, and should be, in their early accession. Bring up the digestive power, by giving it something to work for. Daily exercise, *work*, actual work, the performance of which calls out power in *muscle* as well as brain, will fortify the system.

Purity is a factor essential to health—pure food, pure water, pure air, pure *thoughts;* the whole atmosphere of the life should be in accord with universal *purity*.

Consumption once established may be dealt with much as bronchitis, the same general indications for restoration of nutritive power existing. Courage, faith, hope, trust, etc., are elements of cure. Treatment must be adjusted to the varying degrees of strength. If able to ride or walk, do not give up this agreeable exercise, rain or shine, cold or hot. A daily air-bath and sun-bath, administered at the time of the dry rubbing, should be given, and the soap and towel bath as frequently as is consistent with comfort and strength. Perhaps daily, in some cases, is not too much, but the average patient will do better less often. Wherever there is pain—in side or chest—apply the hot fomenter, dry, over the affected part, for from twenty minutes to one hour. Drinking of hot water is strongly remedial, in any amount the patient feels capable of receiving. An enema of warm water, to cleanse the bowels well, following the fomentation, as the case may need, may be taken. While mechanical massage gives "alluring" promise of help in these conditions, when it cannot be made available, such movements as tend to develop chest and abdominal muscles may be applied with great good results. Passive movements are the only ones adapted to the very feeble. Have an attendant press firmly the arms for five minutes, rest as long, and then give each leg the same deep, firm pressure. Hold the feet, one in each hand, a few moments. Gently, but firmly, press down the sides of the spine, and give the thighs a squeezing pressure for several moments at a time. Lightly stroke the spine from the back of the head to the end of the spine with the finger tips, like a brush. Repeat this a half-dozen times, or even more. On the back inflate the lungs, exhale slowly; repeat this about

twice. Do not at any time allow the stomach and chest to be encroached upon by improper stooping positions. If you sit, sit upright, shoulders thrown back. Get all the chest room possible, and never let the stomach become so distended with food as to limit chest space. Aside from other considerations, the mechanical disability forbids this.

Have you courage to say *no* to appetite?

CHAPTER XXV.

RHEUMATISM.

Doctor: Rheumatism is understood to be a "blood disease," as Dr. Watson calls it. He says: "The circulating blood carries with it a poisonous material, which by virtue of some mutual or elective affinity falls upon the fibrous tissues in particular, visiting and quitting them with a variableness which resembles caprice, but is ruled, no doubt, by definite laws." This is easily understood when we know what this poisonous material is in general character, and why these fibrous sheaths and coverings of the muscles are most affected. Let us see. If digestion and assimilation are disordered, what is the effect upon the blood?

Viola: It is imperfectly elaborated, consequently defective in quality, and unduly loaded with unused nutritive material, which becomes poisonous and hurtful to the tissues wherever distributed. There is a sympathy existing between the stomach and liver, the great center of nutrition, and the muscles. Irritation, congestion of the center, robs the muscles of due nutritive supply, and they become weak; slight proximate or exciting causes, such as chilling of the skin by cold or damp, drives the blood to these weakened muscles, and they retain it because too feeble to urge it forward; inflammation and most excruciating pains result.

Julia: But we often see persons who use their muscles in hard labor, and who are exposed enough to toughen them to all kinds of weather, quite subject to this disease, as well as those who are delicately cared for.

Doctor: Both supply the conditions favoring rheumatism. In the one case, the organs of voluntary motion—the muscles, rather, of those organs—are violently employed, while at the nutritive center there is a constant irritation kept up by the use of poor food, salted meats, fats, white-flour bread, biscuits,

greasy and raised with chemicals, stimulants, tea, coffee, beer, whisky, etc. A bilious attack, and medicine to force the liver to pour out bile, followed by stimulants to give tone to the system,

PERPETUATES THE IRRITATION.

In the more tenderly "housed and fed" the style of diet and almost entire disuse of the voluntary muscles tend to the same results. Both are badly nourished, and this great fact in rheumatism, the lessening of muscular power from lack of nutritive supply, and the excess of nerve nutrition, showing itself in the form of pain, bears upon all cases of rheumatic derangement. Rheumatism is not possible unsupported by digestive imperfection.

Julia: Some one has called it "dyspepsia of the muscles." It is true that inflammation of the fibrous sheaths of muscles is only an expression of digestive irritation, and all forms of treatment seem to indicate this view, for the biliary organs are attacked with weapons which make them yield copiously of their secretions; *calomel* is the most prompt and effective, the stomach is made to disgorge itself, and the intestinal tract to writhe under the action of some particular remedy (?). All this tends to *relieve* an acute attack, and I would like to know *how*. It is surely not *curative*.

Doctor: Please open my case-book at "Rheumatism," and while reading the history of some of the cases there recorded perhaps you will find the question answered. It will be useful, also, to trace the progress in this connection of acute with chronic rheumatism.

Viola: *I* have already studied these stories of your patients, and from them am able to gather this information: That arousing the digestive organs to a sort of irritation, which is only another phase of the same remedial effort of the system which was instituted in the first place to relieve the organism of poisonous material, does take away rheumatic pain, though at great loss, for drug irritation is now set up, and the rheumatism not having been *cured*, but simply *hidden* by the drug complication, the ground that is lost is sought to be regained by continuing the same process, and further exhaustion results; the

causes are perpetuated and increased. The organic energy of local parts being weakened, they are distended, and another "acute attack" comes on, perhaps induced by the most trivial exciting cause. A mere change in the weather, slight exposure, a little over-indulgence in eating, etc.; and so on, until, as the system becomes less and less able to make violent resistance as at first, it sinks into

A Continued Enfeebled Effort;

and constant, though less severe, pain establishes the fact of chronic rheumatism with its family of distressing ailments and disabilities. This is about the line of travel in these cases. It is not called rheumatism when a bilious attack or indigestion appears and is cured, then another, and soon rheumatism and its cure, and repetition of indigestion, biliousness, rheumatism, until the ugly condition comes to stay, and will not be ousted by the most formidable array of drug poisons.

Doctor: In *chronic rheumatism*, and somewhat in acute rheumatism, the spinal cord takes a part, as is evidenced in acute attacks by the twitchings, wholly involuntary, of the affected muscle or limb, giving rise to excruciating pain. It seems plain that the inflammation of the fibrous tissues of a joint or muscle irritates the spinal nerves which run through this inflamed tissue, and they convey to the portion of the cord where they arise so much irritation as to cause irregular function, as the will is for the moment lost, and involuntary twitches allowed to occur. *What would be the inevitable tendency of the frequent occurrence of these involuntary twitchings in repeated attacks of acute rheumatism?*

Julia: The function of the spinal cord would become disordered, and as the *causes* of these attacks are not removed, the irritation becomes more and more firmly fixed, and after a while the limbs almost fail to respond to the commands of the will. At the same time, the disturbance of the digestive viscera, which originates the malady, radiates not only towards the spinal cord, but the brain, implicating the nervous system still further.

Doctor: You have omitted one factor, and that is the *sympathy which exists between parts of like organization.* Now, the sheath of both the spinal cord and of the nerves which proceed from it is of the same texture as the sheath of the inflamed parts, is of fibrous tissue, and the irritation of the one is reflected upon the other, and any degree of irritation that is morbid which exists in the fibrous sheath tends to interfere with the highly organized, delicate spinal cord which it incloses.

these organic nerves by medicines or improper alimentary substances greatly disturb the office of the brain and spinal cord. Nervous rheumatism or neuralgic rheumatism depends upon its source in irritation of the brain and spinal nerves, together with fibrous inflammation of the muscular sheaths. In chronic rheumatism this nervous complication is exhibited at the onset by some degree of slowness in making muscular movements, the control of the will having been partially lost; then the joints become somewhat rigid, and perhaps paralysis follows. And, as you have seen, the *visceral* disorder leads to irritation of the fibrous textures of the voluntary muscles, and from both the viscera and the muscles influences are brought to bear upon the spinal cord and brain, complicating the difficulty as it proceeds. *Rheumatism of the heart* is a complication which takes place under the administration of drug treatment, the use of mercury and colchicum particularly. The joints are freed, and the heart being the largest internal muscle, including fibrous tissue like that of the other muscles and joints, the whole mischief of the excessive irritation produced by drug poisons is *reconcentrated* at this organ. Dr. Gully says that while he was still practicing the ordinary drug treatment, and before he knew anything of better methods, this was his opinion of metastasis, or transfer of rheumatism to the heart. In a work written by him at this time is found this passage: "An instance of the transfer to the heart was shown to me a few months back by a brother practitioner. There certainly was pain, palpitation, etc., of the heart, but as the patient had been and was then taking large doses of mercury and colchicum, I ventured to

suggest the cessation of these and the application of mustard fomentations over the pit of the stomach, whereby the heart was soon freed from pain, though it continued to be very irritable. The medicines, in fact, had produced sympathetic irritation of the heart, and I believe this to be the only transfer that occurs. It may, however, predispose the heart to the actual metastasis, and in such case presents another practical argument against violent medication of the viscera in rheumatism."

Dropsy of the chest and abdomen, following acute rheumatism, is dependent on the same cause; *and none of these dangerous complications ever arise* under treatment that has regard to the causes of this disease. Nature always "seeks to save." In this case she throws a part of the effort, which has its rise in the internal viscera, to the more remote parts, which are not so essential to life.

Why, then, apply to these internal parts still further causes of irritation, thus centering remedial effort upon the more delicate organs? This is the very course pursued in acute rheumatism, and is the prolific parent of abundant cases which are "going to and fro" throughout the land, seeking cure and finding none. And yet there is no form of disease more certain to be cured by proper treatment than *rheumatism* in its acute form, and in most cases chronic rheumatism is equally certain of *cure* and always of comparative alleviation, and arrest of fixation of joints and loss of locomotive power. What are the symptoms of acute rheumatism?

Viola: The most prominent symptom of rheumatism is *pain*. It is severe. It occupies many parts at once, and continues in spite of efforts made for its abatement. Being an inflammation of a particular tissue, the *fibrous tissue*, it may be expressed wherever that tissue is employed in the body. In acute rheumatism there is pain, heat, redness, swelling; inflammation of one or more of the larger joints, which is disposed to shift to some other part, and then suddenly return to its first quarters. In many instances it does not wholly leave the joint, but invades others quite as painfully. The ankles and knees are most often affected, but perhaps the wrists, knuckles, elbows are quite as liable. Finger joints and even the jaws are

affected, and the shoulders and hips. Inflammatory fever attends this disease; pulse is bounding, cheeks flushed, head aches, there is a sour-smelling, profuse perspiration, which attends the fever, but is no relief to the patient. Tongue coated, bowels constipated, kidneys secreting a thickish urine. Delirium does not attend this fever, and the characteristic symptoms of typhoid are absent. The inflamed parts are extremely sensitive, even spoken words seem to annoy the patient in some instances, and there is inability to move from *fear* of pain, not actual loss of power to do so. The fact that

CONSTITUTIONAL SYMPTOMS

always precede local pain points to the causes and cure, as attention given to local pain can at best only palliate, and is not liable to succeed even in accomplishing so mild an intention.

Treatment.—The proper plan of treatment will regard the visceral irritation as claiming first consideration, and the condition of the muscles and joints as quite secondary. Begin with hot foot-bath of ten minutes, if patient is able to be so placed that it can be given. During this time ply the stomach with copious drinking of hot water; lemon juice may be added, but no sugar. This to be taken by the pint, not a few sips. Add hot water to the bath, that when the feet are removed it is hot as can be borne; rub feet dry, and put patient in bed with bottle of hot water to the feet. Apply a hot flannel, dry, over the liver, and over this the fomenter. If a fomenter is not at hand, flannels wrung from very hot water will answer, changing them as soon as they begin to cool. Always cover well with dry flannel. Wherever pain is severe apply flannels wrung from hot water, or, if cool applications are more agreeable, these may be used, but the preference is liable to be given to hot applications. After fomenting the liver one hour, during which time hot water has been freely taken, clear the bowels with full enema of hot water, or comfortably hot. Work the fluid well up in the colon, rub and knead, and have not less than two to four quarts received. Administer the second, if necessary. Continue to apply soothing, cool or hot, cloths, as the patient prefers, to joints or painful parts. Keep

absolutely quiet, warm, but do not force a perspiration. Apply the abdominal bandage, wrung from hot water and well covered with dry flannel, and over this let the fomenter be placed, about the liver region. Lemons may be eaten freely, or the juice taken with the copious hot-water drinks. Whenever pain begins to subside, cover the patient warmly and enforce *rest;* disturbances of whatever kind must be avoided. Where pain and fever are pretty continuous and persevering, they may be met on their own plan of procedure, continue and persevere in treatment. Injections may be repeated every three hours, preceded by fomentation to the liver of an hour each time. If the condition of the patient admits, the spine may be sponged occasionally in hot water. Sometimes there is such tenderness of the joints you cannot reach the spine, as in some cases pain is greatly aggravated on slight effort to lie on the side or face. A hot soap and towel bath (see "Hygienic Appliances") may be given each night, and if there is much sour, fetid perspiration, every morning after the first fomentation and injection, about nine o'clock.

In this, as in every case, somewhat depends upon peculiar conditions and circumstances. The main idea, to aid Nature in her efforts to eliminate hurtful matters from the system, and to "carry on the war to extermination" of causes, favoring the diffusion rather than concentration of effort, may be wrought out by less or more treatment as the case may be. As pain ceases and there is inclination to *rest,* this must be encouraged.

Absolute Rest of the Digestive Organs

is imperative. So long as symptoms are lively take no food, no matter if they hold out for days. They will finally yield very gracefully and completely. On beginning to take food, it must be very simple. Baked apples, or any kind of fruit, raw or cooked, with a little whole-meal cracker, well masticated, or gruel, thin and nicely done, corn-meal, whole-wheat meal, or even rice-gruel may be used. Vegetable tea, if liked, may be taken sparingly at first. With proper management during the convalescent stage of a case treated thus, there need be no fear of complications or injurious sequelæ following acute

inflammatory rheumatism. I have never known a case to terminate other than most favorably under our treatment; and have taken cases pronounced hopeless under the ordinary practice and cured them, so that fifteen or more years since, I hear the patient never has had a return of the formerly constant barrier to enjoyment and usefulness. Please read from case-book an instance of this kind.

Viola: Called to see E. B., a little girl of about twelve years, about ten miles in the country, and I reached there by moonlight, a June night. On approaching the house, the patient's moans were distinctly heard with each breath. Reaching her room, which was a large downstairs front room, I found her bed drawn before an open window, the pain about the heart so severe that a great farm laborer was detailed to stand over her, pressing her heart, as she thought this somewhat mitigated her pain. He told me he would rather work in the harvest-field, so constant had been the demands made upon his strength for several days. Her father and two big brothers also in attendance, besides efficient sisters as nurses. The case, which had begun in acute rheumatism, was treated according to the best advice of the popular schools, several physicians in attendance, and at last pronounced hopeless of cure. It was not thought many hours would elapse before the fatal termination arrived, and at this desperate juncture one of the brothers applied to me. What did I do? Called for hot water, a washing-tub, and blankets. Had the bed carefully moved away from the open window, a little fire made on the hearth, and was ready. The middle of the blankets was dipped in hot water, twisted closely by strong hands at the dry ends, and placed over the patient as she lay with knees drawn toward the chin, unable to move or be moved. Hot flannels were also placed on the chest and stomach. All covered with dry blankets and light covers. Jugs of hot water placed under the knees. This was all that *could* be done in the case; for several hours this treatment persevered in. Some degree of comfort was soon felt, and even sleep came before morning. Conditions were so much changed for the better an enema could be administered, patient could swallow, and even be turned over in bed. I left at nine o'clock next morning, after seeing her com-

fortably situated, and never made another visit to the case. Word was brought me daily for a time, and I gave directions how to pursue treatment. She tells me this is the last of rheumatism for her; and during her childhood there was always a looking forward for one of her severe "spells" of rheumatism, which was hers by inheritance as well as acquisition. There is no need for acute rheumatism to progress into chronic; remove the causes of the first, and maintain your post, and lo! what is there to support the latter?

Chronic Rheumatism.

Julia: How can that be dealt with successfully? Here you have a most tedious array of time-weary ailments and disabilities. A malady which has been converted from an acute into a chronic form by ignoring the cause and adding to it, while attention is directed to local parts. The digestive organs are made the sport of the most absurd medication and dietetics. Calomel, opium, colchicum, conium, alkalies, guaiacum, iodide of potassium, etc., "and the patient continues to suffer," says Dr. Watson, "notwithstanding the diligent enforcement of all the approved remedies and plans of treatment, one after another." Becoming chronic, the treatment consists of continuous repetitions of mercury, iron, opiates, iodine, etc., while the affected joints are liable to be blistered, leeched, and treated to all sorts of irritating liniments and plasters. Then, as a hope of *prevention* comes, generous diet, strong doses of coffee, beer, wine, porter, rich meats, soups, jellies, etc. When the whole system is thus deteriorated and disordered, and the case is a miserable, broken-down, suffering one, what can hygienic treatment do?

Doctor: Just what should have been done at first, and which was then much more quickly possible, of course. Relieve the viscera, perfect nutritive acts, and withhold excess of nutritive material.

Bring About Capacity

to digest *abundance* of simple food, not excess. *Abundance* may mean not so large quantity, but *enough.*

This is a case for the powers of mechanical massage conspicuously to exhibit themselves. An example just occurs to mind of one recently treated by Dr. Glass. A man, about forty years of age, had acute rheumatism several years ago, medicated, attacks became frequent, and finally assumed permanent chronic form. He was prevented from attending to business much of the time, suffered constantly, and resorted to all sorts of devices, medicines, and medicinal springs. Entirely discouraged, and expecting, since such a variety of treatment had failed, there was nothing before him but suffering and helplessness, he was led to consult the doctor, who at once said to him: "I will remove the *causes* of all your trouble, to that point my efforts will be directed, and when that is done you will bid good-bye to your crutches and your infirmities. Trust me to do this for you without reference to your local pains. Tender parts will be tenderly dealt with, but not held responsible for even their own conditions. Obey to the letter my directions as to your diet and home care. You will recover."

Not half believing this, but desperately clinging to the words of encouragement, the patient placed himself under treatment. In four weeks was well; used neither crutch nor cane, gained in flesh, and was able to attend to an extensive hardware business, as he had not done for years. Mechanical massage, together with judicious restrictions as to diet, and some applications of water internally and externally, brought about these happy results. The mind was led out of its morass of diseased imaginings, and hope and *faith* increased. Under home treatment, the patient suffering from chronic rheumatism may do much better than to *continue to do badly*. Give up drugs entirely, also your rich food and stimulants. Study the perfect way in diet, but do not bend mental or physical energy in the direction of "What shall I eat?" Very little thought need be given by you to this. It is already thought out for you, and without trouble on your part; common-sense will dictate what is agreeable to nature. Deny appetite; there is

No Real Pleasure in any Bodily Appetite.

Say so, think so, act accordingly. Use grains and fruits mostly. If you do use meat, and I do not recommend it, use beef or mutton only once a day. The whole-wheat-meal bread, and unleavened, is best. Have not more than *two* articles at one meal. Drink *regularly* of hot water. Have stated hours, an hour before breakfast and dinner, and at supper-time let hot water drinking take the place of food. Milk and eggs should not be used at all in some cases, and in any case very sparingly. So of butter. Of course, pork and all products of the hog are harmful. Well masticate and insalivate the food, even if it be soft food, as mushes of wheaten grits, corn-meal, etc. The indispensable vegetable acids which aid in oxidation and elimination of urea and lime, said to be found in excess in the excretions of rheumatic patients, are abundant in ripe fruits, as apples, pears, peaches, plums, grapes, gooseberries, cherries, strawberries, oranges, lemons, etc., and in melons and tomatoes. Malic and tartaric acids are found in fruits, and these unite with the lime salts in the system and carry them out. By regulating the diet a most powerful influence is gained over this disease, and the possibilities of cure are increased. The treatment should be similar to that followed in acute cases, though, of course, less vigorous for apparent reasons. Following careful dietary, eating slowly, and only enough to supply bodily waste, there is no material retained in the system that is hurtful, waste matter, and hence no vital power expended injuriously, but in building up and adding to the strength of the organism.

There is one remarkably efficient measure which is within the reach of all who may be afflicted with rheumatism, either acute or chronic, and is equally applicable to both forms, and that is

Fasting.

Casey A. Wood, M. D., Professor of Chemistry in the Medical Department of Bishop's College, Montreal, in an article entitled "Starvation in the Treatment of Acute Articular Rheumatism" *(Canada Medical Record)*, gives the history

of seven cases where the patients were speedily restored to health by simply abstaining from food from four to eight days, and he says he could have given the history of forty more from his own practice, but thought these would suffice. In no instance did he find it necessary to extend the fast beyond ten days. His patients were allowed to drink freely of cold water, or lemonade in moderate quantities if they preferred, and simple sponging with tepid water was resorted to as indicated by feverishness of the surface. In no case did this treatment fail. No medicines were administered. The cases reported "included men and women of different ages, temperaments, occupations, and social positions." He further says: "From the quick and almost invariably good results to be obtained by simple abstinence from food, I am inclined to the idea that rheumatism is, after all, only a phase of indigestion, and that, by giving complete and continued rest to all the viscera that take any part in the process of digestion, the disease is attacked *in ipsa radice*." In chronic rheumatism he obtained less positive results, but did not venture to try fasts of longer duration. Dr. Wood concludes by saying that "this treatment, obviating as it does, almost entirely, the danger of cardiac complications, will be found to realize all that has been claimed for it—a simple, reliable remedy for a disease that has long baffled the physician's skill; and the frequency with which rheumatism occurs will give every one a chance of trying its efficacy."

My experience in treating chronic rheumatic patients would lead to the belief that, while such rapid and positive changes are not to be expected in these as in acute cases, *a repetition of fasts* will bring about results equally as satisfactory.

The *skin* must be induced to become active. A dry rubbing every morning for five to ten minutes, having the attendant use a dry flannel towel and do the work briskly, by gentle patting of the whole surface, may be useful in every case.

Sun-baths are indispensable. Remain an hour or two daily in the sun, protecting the face and head from its rays, and wearing just enough clothing to keep comfortably warm. *Breathe deeply* while doing this.

A fomentation to the liver about four times a week, of one hour each time, followed by sponging the fomented surface in cool water, and rubbing well dry. Full enema of hot water, clearing well the bowels, may be taken after fomenting, *twice* weekly. At other times, if there is unusual biliousness, the enema may follow every fomentation. Wear the wet abdominal bandage, if it can be done without a continued feeling of chilliness, about every night, though it may be omitted occasionally. Daily, at a stated hour, have an attendant give gentle pressing, squeezing movements to each arm, from shoulder to wrist, about three minutes. Rest five minutes. Now to each leg, beginning at the knee, three minutes each, and *rest.* From thighs to knee, three minutes each, and rest. Patient lying on a bed or couch, let the attendant place one hand over the right side at the lower ribs, the other over the left, and firmly press the hands towards each other. Gently relax the pressure, and repeat this after the patient has inhaled deeply and slowly exhaled. Kneading movements of the abdomen may be given as the case improves. (See "Massage.") Finally, and "*first* and last," know that these measures you take are only an effort to harmonize your physical life with the ever-present All-Life, to place *yourself* and your body in such relations to that Life as shall secure its abundant expression in your individual soul and body. Become enthused with the work, count no cost of time, money, or effort too great to attain this regeneration of body and soul. Arise to spiritual life and obedience; and health abundant, running over, *will surely follow.*

CHAPTER XXV.

KIDNEY DISORDERS.

Doctor: Perhaps the spleen and pancreas will feel themselves slighted by not having their diseases noticed, but our purpose towards these organs is practically served when we faithfully bring all the others into harmony, and so we will now take up kidney disorders. What is the office of the kidneys?

Viola: Excretory: "through them, and with the urine, are drained away many of the impurities, habitual or *accidental*, of the circulating blood, and any excess of its aqueous ingredient. The composition of urine is complex and perpetually shifting. Everybody knows by his own observation that, with the most perfect health, the urine may vary considerably in its sensible qualities—in quantity, for example, in color, in its specific gravity. If much water be drank, or other liquid, more urine is secreted. If much water pass off by the skin or through the bowels, less passes by the kidneys; and contrariwise. Its natural color resembles that of wheat-straw, of amber, or of pale sherry."

Doctor: You are now ready to understand why these excretory organs are so

Liable to Irritation

and disease, not self-imposed, but occasioned by faulty performance of other functional acts. If the liver fails to secrete bile elements, if the blood contains excessive and unperfected nutrient materials, or other substances foreign to its welfare, the kidneys are found doing vicarious work, and are thus brought into trouble. Mental states, also, have great control over the functional performances of these organs. Inflammation of the kidneys, and *nephralgia*, or pain of the kidney, "a fit of the gravel," is attended with pain of a dull character, though sometimes very severe, usually located in the loins, on

one side, and follows the track of the ureter of that side. The thigh is numb; frequent desire to make water, and urine is high-colored; nausea and vomiting are present. The exciting causes are as various as the predisposing causes, and they are found, if traced, in every habit and influence which bears upon the life. The pains of this affection are apt to be mistaken for either colic or rheumatic pains; but rheumatism of this region of the body usually affects both sides, and is aggravated by motions which call the muscles into play, stooping, for instance. There is no trouble of urinary functions, and no nausea or vomiting. Colic more closely resembles nephritis; there is nausea and vomiting, and it may occupy such localities of the abdomen as correspond to the place of the ureters, but no change occurs in the urinary functions, and this is a main point of distinction. But practically, a mistake in diagnosis here is of no importance, for the treatment looks to subduing the inflammation, relieving pain, and removing causes. In these cases, as in calculi of the liver ducts, the pain suddenly stops when the ureter is freed by the passage of calculi into the bladder. There now follow symptoms of

Stone in the Bladder;

pain after passing urine, frequent desire to urinate, the stream frequently stopping while the urine is voided. It takes from a few hours to several days for the painful journey of a calculus to be accomplished.

Julia: Do these symptoms show conclusively that calculi are present?

Doctor: By no means. The functional office of the kidneys proves this, if we had no other. The blood overcharged with material which should have been eliminated by other organs, or should probably never have been introduced, passing to the kidneys, provokes them to secrete these matters, and it is their presence in the kidneys which induces remedial action; pain, frequent inclination to urinate, a high-colored, turbid urine, etc. Luxurious livers and the intemperate in every way are liable to be thus affected.

Suppression of urine and *retention* are sometimes confounded with each other; please define each.

Viola: In *suppression*, no urine is secreted; in *retention* it is secreted, but does not pass off. What is the result if no urine is secreted from the blood?

Doctor: Coma and death. You know that

Urea is an Excrement

removed by the kidneys *constantly*, as the blood passes through them, and as fast as it enters the blood. If it is not, it circulates with the blood to every part of the body, poisoning every tissue, especially affecting the brain and nervous structures, but not missing its harmful effects on all.

Julia: How marvelous that the blood, "in which is the life," can become a vehicle of death if it is not purified from deleterious matters which are the unceasing products of organic processes—the sewage of the body. If the lungs do not extricate carbonic acid, all the animal functions speedily cease, like the blowing out of a candle. If they eliminate imperfectly, the physical life falls just so far "below grade." In our study of the liver, we saw that when the blood is not purged from the excrementitious bile, the powers of the organ are debilitated and finally destroyed.

Doctor: This malady, which is really nothing more than a symptom, is not for some time necessarily fatal, and prompt remedial measures are liable to overcome it. I feel sure, from cases observed, that vicarious discharge of urea takes place, for the skin gave off a urinous odor, the patient *tasted* it, the olfactory nerves perceived it, and bowel discharges were plainly affected by its presence, while in another case the sensible qualities of urine were discoverable in the vomited matter. These patients recovered. There was engorgement of the kidneys, the liver, and stomach most probably in these cases, and in others. Rather a formidable condition, but not incapable of control.

Diabetes

is an opposite, so far as kidney secretion is concerned, and quite as bad, though perhaps less rapidly fatal. What does the word diabetes mean?

Julia: To pass through. Urine in too great quantities constantly running off would constitute this disorder, but does excessive flow of urine always insure it?

Doctor: Oh, no. Nervous people pass great quantities sometimes. A little unusual excitement will prompt the secretion, greatly to the annoyance of the patient. Every one urinates more freely in cold weather than in warm, because the skin transmits less fluid in perspiration. Articles of food and kinds of beverage influence this secretion. The quantity of urine passed is a most prominent feature of diabetes, but its definite symptom is the quality of that fluid, its becoming loaded with sugar. Watson says: "In true diabetes the urine is never without sugar." "Diabetic urine is commonly light-colored, and transparent, of a pale straw or greenish tint. Its odor is like that of hay or a faint smell of apples."

Viola: This is a chronic disorder, coming on insidiously, attended with dryness of the skin. People who are thus afflicted do not perspire, bowels costive, tongue dry and parched, thirst intense, and appetite often enormous, while there is great loss of strength. What can be the origin of this queer complaint? Where is the sugar found in the urine formed?

Doctor: The field is open for inquiry yet. But from what is now best known, *the faults of digestion and nutrition* have to bear the responsibility of supporting this malady.

Mental Unrest and Anxious Care

aid in its perpetuation. Dr. Watson says: "In the treatment of every case of diabetes there are three objects to be kept in view. First, to restore the defective power of the digestive apparatus, whether the fault be in the stomach or in the liver. Secondly, to cut off, or restrict as much as possible, the supply of saccharine matter from without. Thirdly, to mitigate or remove the most distressing symptoms. If we could achieve the first of these objects, the other two would fall out of sight; for the disease, which may be regarded as a variety of dyspepsia, would be cured."

Viola: "But hitherto," he continues, "the resources of our art have in this respect been baffled." Is it so? Is it not in

the line of medical possibilities to "restore the defective power of the digestive apparatus"? Why, I believe an amateur in the true healing art can point to means which would do this.

Julia: I was thinking how much light our lessons on digestion throw over this subject, which seems so obscure to minds closed against the admission of simple natural facts in physiology. It seems pitiable that Dr. Watson should express the doubt, "*If we could achieve*," etc. Dr. Taylor could very easily and truthfully paraphrase that sentence like this, *We can achieve* the first of these objects, hence the other two fall out of sight.

Doctor: The name of Dr. George H. Taylor will be coupled in the future, as it is now, with the most

EMINENTLY SUCCESSFUL EFFORT

ever made to answer just such longings, "a kingdom for a cure," as are found in every high authority on principles and practice of physic. He brings to the profession a factor it has overlooked, or element of strength and power it sadly lacks. To the people he gives hopeful assurance of a limit and final extinction of their depressing maladies; for he points to *causes*, and furnishes methods for their removal founded on law divinely ordained.

Remedial motion, so prominently brought forward by him, and shown to possess such severely demonstrable reliability, justly merits the leading position assigned it among the hygienic or natural methods of successfully treating chronic diseases. That, the leading factor, coupled with such other natural means as are indicated in the case, affords all the possibilities of relief and cure.

Viola: We are, then, to understand that the treatment which would suit derangements of the liver and general nutritive faults, with local pain, would be proper in this disorder?

Doctor: Precisely. Great attention to diet must be observed. The most rigid adherence to simplicity will bring the best results. It is not necessary to particularize.

CHAPTER XXVI.

CHRONIC DIARRHŒA.

Doctor: This is a phase of intestinal derangement which presents such excitability of the intestinal canal, that everything taken into the stomach as food or drink is liable to bring on discharges which consist of the undigested food mixed with mucus: the "looseness" keeps up, sometimes without pain, only as disagreeable sensations attend the debility which must soon arise from such an interruption to digestion and nutrition.

Viola: Is not this condition due to chronic inflammation of the mucous membrane?

Doctor: It is; and as it increases in severity, the secretions of the liver, stomach, and pancreas, as well as the intestines themselves, become very morbid. The discharges are dark-colored and very offensive, scanty, and accompanied by griping pains of some severity. Nausea, and sometimes vomiting also, ensues. Appetite is delicate, but not always affected, except in the way to become quite ravenous. Of course, there is emaciation, yellow skin, hot, dry hands, despondent expression of the countenance, etc. The abdomen is swelled, or very flat, sometimes tender, and again capable of bearing pressure, without any pain. Hectic fever often attends this disease; the discharges occur sometimes only after food or drink has been taken, again only at night, or only during the day, or at particular seasons.

What Are the Causes

of *chronic diarrhœa?*

Julia: I suppose whatever causes intestinal congestion—bad food, drinks, medicinal irritants, etc. Persons in the habit of taking pills are liable to it, also the intemperate in eating and drinking: anything that breaks down the constitution induces the disorder.

Doctor: Treatment. It is not always a very easy task to meet the indications for treatment in these cases; but with due care and management, hygienic appliances are likely not to fail in any case, at least where it comes short of disorganization. This much from personal experience in the treatment of this malady. First and foremost is the *diet.* You must supply nourishment, and yet irritation in the intestines is to be excited as little as possible. Here is an opportunity for nutrina to exhibit itself as the leading dietic article, capable of answering just what is needed, a food not irritating, and supplying nutritive materials especially grateful to the starving tissues. Mild, but well-persisted treatment, seeking to arouse the skin to action by dry rubbing daily; hot towel baths about twice a week, rubbing well afterward; fomentations of twenty minutes, twice daily, over stomach and liver; very full enema of hot water following the second fomentation, which will probably be taken in the afternoon, and wearing the compress over liver and abdomen, so well covered with dry flannel as to prevent chilliness. Hot-water drinking is conspicuous for its good effects. Dress warmly and have the clothing evenly distributed. Wear flannel next the skin; or silk, and flannel over this. Hot foot-bath taken at bed-time; three minutes. Massage applied by an attendant to arms and legs, and very gentle rubbings of the stomach and liver. Whenever there is pain apply the fomenter, and if necessary, take a full enema; keep quiet, but breathe very deeply of pure air. Gentle riding, or even a short walk, as is agreeable, will be good. *Sunlight* is indispensable. Courage to

Deny Morbid Cravings

and false assertions of these diseased states, through the sensations, will aid in the recovery.

Viola: Case in point. "Mrs. N——, a lady of very frail constitution, it would appear to look at her; but to learn her pathological history, one would decide her by no means a very tender plant, having lived through so long a series of efforts to get well under the administration of methods which gave no aid in removing causes, and rather aggravated than palliated

effects. The diarrhœa, induced at first by improper eating at improper times of food which, for mixture and quantity, must have excelled in the faculty of producing violent indigestion, was met with medicines to stop the frequent discharges, just what nature did not want done, and as the sequel shows, would not permit to be done, now becomes a fixed habit engrafted upon a train of dyspeptic, catarrhal conditions which complicates the plot extremely. Castor oil and laudanum, rhubarb, chalk, sulphate of copper, with opium, tannin, Dover's powders, logwood, calomel, acetate of lead, chloride of iron, turpentine, nux vomica, etc., are among the remedies she knows to have been administered, and, "most cruel fate of all," she has been both leeched and blistered for this obstinate persistence in holding on to life. The abdomen is much scarred by these friendly agents. This case resisted treatment and travel and 'good living' over four years; was much reduced in flesh, and had no strength for voluntary effort. The mouth is covered with little ulcers, not always equally bad, but is never quite clear, great nervousness, sensitive to every breath of wind that blows, abdomen somewhat tender, stools very fetid, like jelly sometimes, but generally dark and watery; so acrid are these discharges, the anus and wherever any portions of adjacent parts are exposed to its coming in contact with the surface, become excoriated. What can be done? I have a thin gruel prepared from corn-meal cooked an hour, then allowed to stand until the white portion rises to the top, and take this off. My nutrina is all ready, in another vessel. I take equal parts of these, add half a spoonful of cream, perhaps to half a pint of the food, the whole being about as consistent as rather thin cream. This is generally prepared to be taken warm or even hot. It is eaten in small portions, very slowly, three times a day. Later, fruit juices, mild sub-acids are added; and in fact, a variety, not at one meal, is had by using different grain preparations; but bran-tea, nutrina, is standard.

"Treatment takes in all the nice points of adjustment to these delicate cases, but *rest* is never broken in upon, even if irregularity as to time of a process results. After two weeks' care in her room, the patient was brought to the machinery

room, and a little derivative treatment given. From that day there was no intermission; a gradual growing toward the sunshine brought the case up to such a degree of strength that at the end of three months, 'vacation' was granted for two weeks, and a subsequent stay of two months placed her quite beyond the need of other than home treatment. The diet was changed soon as possible to a dry, crispy grain preparation, and fruit. Even the whole-wheat-meal crackers were partaken of with satisfaction."

Doctor: Under home treatment I would advise the use of the same gruels, until more solid foods are better suited to the case, and no one need die of chronic diarrhœa, who will give up taking drug medicines, diet closely, breathe deeply, and live a good, *faithful*, trustful, loving life.

CHAPTER XXVII.

INTESTINAL PARASITES—WORMS.

Doctor: Prof. Arnold Heller, in Von Ziemssen's "Practice of Medicine," furnishes accurate information in regard to these "creatures." How many does he say take up their abode in man?

Viola: About *fifty* animal parasites; but *twenty-one* inhabit the intestines, and only *eight* of that number are peculiar to man. The rest are parasites of some domestic animal found occasionally in man. He also gives a table of statistics showing they are oftener met with in adults than in children.

Doctor: How may these parasites be prevented admission?

Julia: Heller says: "Speaking in general terms, we may say that cleanliness in food and drink, as well as in the house and kitchen, is what we must rely on most to protect us from invasion. More general instruction in rational diet and hygiene is at present urgently required."

Doctor: What is the first condition necessary for the development of a parasite in the intestine?

Viola: Of course, the introduction of eggs, or embryos, or of young forms. Persons who are engaged in the preparation, sale, or dressing of animal food are especially afflicted with tape-worm.

Doctor: You may name the four general classes of intestinal parasites.

Viola: 1, *Infusoria;* 2, *Tape-worms;* 3, *Leech tribe;* and 4, *Round-worms.* The *tape-worm* inhabits the small intestine, where, folded into many coils, it lies surrounded with chyme; it can move but little from its original position. In order that a tape-worm can be developed, it is necessary that a living embryo be introduced into the stomach. This usually happens from eating flesh that is infested, and which has not been sufficiently cooked to kill the embryos or render them incapable

of further development. Occasionally they may be introduced with other articles of food which have been in contact with infected meat, and to which the embryos have adhered, or which have been cut with a knife that has been previously used for cutting infected meat. The possibility of infection by the habit of using meat imperfectly cooked is constantly present. This habit is becoming every day more common, and is extremely favorable to the propagation of tape-worms.

Doctor: How is the "tænia solium," one of the tape-worm family, acquired?

Viola: By eating pork which contains the embryos.

Doctor: And the "tænia saginta?"

Viola: By the use of the flesh of ruminants, the cow in particular. This species has often been observed in those children who, for any reason, have been given raw grated beef by the doctor's order.

Julia: Küchenmeister relates that in his own house embryos were found in water in which some sausages had been washed.

Doctor: What country has been called the classic land of the "tænia saginta," and why?

Viola: Abyssinia; for every one, almost without exception, is infested with tænia, and there it is that the use of raw, still quivering cow's flesh is looked upon as the greatest delicacy. There could not possibly be more favorable conditions than these for the propagation of tape-worms.

Doctor: What disturbances of the system are specially due to the tape-worm?

Julia: Symptoms of more or less disturbance of the digestion and nutrition, and even of the nervous system, occur, without the patient being in the least able to localize his troubles. A sensation of ravenous hunger followed by fainting, should nothing be taken to satisfy it, is said to be of frequent occurrence. Distention of the abdomen, diarrhœa, alternating with constipation, the feeling as of some foreign body moving about in the abdomen, with many other symptoms, have all been put down as due to the presence of tape-worm.

The Sympathetic Disturbances

dependent on the presence of the worm are itching about the anus, tickling of the nose, salivation, vomiting, various sorts of hemorrhage, perspiration, headaches, ringing in the ears, palpitation, irregularities of menstruation, and many others, but more especially nervous disturbances of greater or less severity, such as cramps, deafness, numbness, blindness, and so on.

Doctor: The worm is scarcely accountable for all these symptoms, which would more properly be set down to some nervous affection of the patient.

There is no trouble in finding similar symptoms where chronic derangements of any part of the body have long prevailed. I would have you revert to the problem of how we are to be protected from the introduction of living embryos. What does your author say about this?

Viola: "By establishing a strict compulsory meat inspection we must prevent any infected meat being exposed for sale. *Such an inspection will, however, only be possible when we have erected public slaughter-houses!* Indeed, *even by the most careful inspection*, we can never prevent individual embryos *escaping attention and being sold with the meat, and eaten*, for they are by no means distributed equally throughout the whole body of the animal."

No meat should be eaten that has not been sufficiently exposed to heat. It is, however, only after long roasting or boiling that large joints of meat are raised to a sufficiently high temperature in the center to kill the embryos. The use of raw meat should be entirely condemned. All this, of course, holds good for meat that has been insufficiently salted or smoked.

The Strictest Cleanliness

should rule, both in the kitchen and in the larder. Meat should never be allowed to lie in contact with other articles of food which are not exposed to heat before being used, nor should they be carried together in the same vessel or basket. When possible, every article of food should be washed before being used.

Julia: *Tænia solium* is peculiar to man, and will be found among all nations that do not despise pork. It is very frequent in Europe and America.

Doctor: The *round-worm* next claims attention. It is a light-brownish or dirty reddish-yellow color; tapers at both extremities; inhabits the middle portion of the small intestine of man, and is seldom found in the large intestine; when it is, it is always dead and on its way to be expelled.

Julia: This same worm is met with in the pig and the cow. How human beings become infested with this worm is somewhat a mystery.

Doctor: You have omitted to give the disturbances they occasion.

Julia: Almost all the symptoms of tape-worm. Even spasms and death, in rare instances, have been produced in this way. Round-worms often find their way into places between which and the intestine there is communication, as the stomach, œsophagus, nasal passages, Eustachian tube, air passages, etc. Should they make their way into the *stomach*, they, as a rule, cause violent sickness and vomiting, which latter generally causes their expulsion.

Doctor: The next and least intestinal parasite is the *thread-worm*—"*Oxyuris vermicularis.*"

Julia: This is found only in the intestine of man. They are most plentifully found in the cæcum: this is their special habitat. Sometimes the whole mucous membrane of the intestine is so thickly covered with them that, as Vix has well expressed it, it looks just like fur. The Oxyuris can only occur in the intestine as a consequence of the entry into the stomach of ripe eggs, which have been furnished by some one who was himself suffering from the worm. There are numberless ways in which the

First Transmission May Take Place.

Once even a few animals have become developed in the digestive canal, there is no further occasion for the entrance of eggs from foreign sources; for the conditions are most favorable for self-infection, ripe eggs of the host's own guests being carried to the mouth, and causing fresh infection.

Bakers, dealers in fruit, cooks, waiters, and persons having like occupations, have abundant opportunity, should they be afflicted with thread-worms, of imparting them to others.

Doctor: While it may not be true that there is any such thing as a diathesis predisposing a person to the acquisition of these worms, dyspepsia or chronic catarrh of the intestines *would favor their thriving.*

In the *rectum* they always give rise to symptoms of such an annoying sort that, among all the usual

Intestinal Parasites, the Oxyurides

must, in spite of their small size, be looked on as the very worst tormentors of man.

The worms descend into the rectum to lay their eggs, and cause, by their active boring movements, an unbearable tickling and a painful itching just within the sphincter and in the folds of the anus, which sometimes becomes so great as to make it almost impossible to keep quiet and bear it. It is at night, especially, that the inconvenience is most felt. This is not because there is any periodicity in the life of the worm, caused by the change from day to night, for "in their home darkness always reigns;" but it is then that external circumstances, such as the repose of the host, the warmth of the bed, and, perhaps, also, the state of the digestion, incite the guests to greater activity.

Sometimes emptying the rectum brings ease, by removing mechanically the worms that were buried there. Many persons who complain of having piles have nothing but thread-worms. These worms frequently find their way into the vulva and vagina, giving rise to very great irritation.

Doctor: While it is hardly possible to prevent a few eggs being introduced into one's stomach, is it in our power to prevent their increase by self-infection?

Julia: It is. An anxious attention to cleanliness with regard to the hands, and especially with regard to the nails, is the most certain protection.

The Oriental Custom

of washing the hands before every meal is deserving of more general adoption among us. The bad habit of munching or even biting the nails should not be tolerated. All persons are to be suspected of having Oxyurides who, half-unconsciously, every now and then by their motions or by rubbing themselves show that they suffer from itching about the anus.

Treatment.

This has been a "poser" put to the hygienic medical people—"How will you cure wormy people, and children, by hygienic agents?" For my part I would not hesitate to kill the worm with poison—he deserves no better fate than does the parasite which may infest head or body of man—but *how* to kill him without killing my patient? I do not know, so I coax the creatures to leave their "lair," and deprive them of a comfortable home, by treating their "host" so to bring the digestive secretions and surfaces up to their normal condition, when lo! the worm gets unhappy, and proceeds to emigrate. He lives on filth, and when the organism is purified loses his living. People who keep their bodies clean—inside and out—eat clean food, and in quantity to keep up clean, pure blood, and the cleansing, purifying processes sustained by exercise, pure air, and pure thought, do not have worms.

Children thus cared for possess immunity from their infestation. But sweets, candies, fine-flour bread and biscuits, pastry, cakes, preserves, syrups, meat, fats, condiments, etc.—food eaten at all times between meals, late suppers, stimulating drinks, all such dietetic ways are a delight to worms—and then the worm medicines!

They build the house which the creature shall inhabit, for they induce just the most favorable conditions for the happy occupants—leave the secretions depraved, the system debilitated—and impurities certain to accumulate. If one wants to

Collect a Worm Show,

give the children the right kind of food to create bad digestion, then administer drugs for that, and finally for the worms, and ample opportunity will be afforded.

Viola: I suppose the worms, then, are a sort of intestinal scavenger. It is taught that these little microscopic creatures found in the tissues and blood in some diseases are there as scavengers; when the blood is purified, and the system restored to health, these disappear.

Doctor: On the principle that "like begets like," and repels unlike? It is true that the more vitality abounds, the higher our states of physical health, the more security is had against infections and "germs," and all influences which are unfavorable to health; even miasm will be for a long time resisted by the healthy body.

Julia: Just as one who is morally pure, and reaching out toward the good and true, seems guarded by a power which does not permit evil to contaminate.

Doctor: How, when the evil is present, shall we proceed to remove it? is the question we started out to answer. I recommend abstemious diet and care of the general health, with the observance of a fast for a day or so in adults; but children can scarcely meet this requirement. Treatment for dyspepsia will about meet the case; and hot-water drinking, lemon added, without sugar, will cause disgorgement of the inhabited intestine. Twenty-three years ago, when lecturing to a class of ladies in an Iowa town, I was asked how I would treat a case of tape-worm? I said, in reply, I would subject my patient to a fast of thirty-six hours, then administer an old-fashioned remedy, which is prepared after this manner: Take the meat of pumpkin seeds, to the amount of half a coffee-cup full; pound them very fine, return the mass to the cup and pour on boiling water until full. Stir this, and give it the patient, to be taken all at one time if possible. In about four or five hours, give a very full injection of warm water—*hot* water. The tape-worm would be expelled with the injected fluid. The question was asked for a purpose of which I was unaware. Three days afterward, two ladies called to inform me that my prescription had wrought a marvelous cure in a man who was the victim of his wormship, as was proved by over thirty feet, I believe, of tape-worm having been expelled after the fast prescribed, the dose taken, and enema administered. I was glad to have it demonstrated that so innocent an agent was capable of disgusting the

intruder. I have been made familiar with these wormy cases, and never knew failure to attend good hygienic treatment, without resort to my humble remedy, useful as it was in the case mentioned. The *thread-worm* may be dislodged by such copious enemas as fill the colon, reaching even its full extent. Very careful dietary, and cultivation of the best health conditions, will effectually bring them to terms. Here is one positive danger to sweet, innocent babyhood—the habit of kissing the baby. Undoubtedly worm germs are not infrequently thus communicated to the little ones. Do not allow babies to be kissed.

CHAPTER XXVIII.

TRAUMATIC TETANUS.

Viola: I know one does not like to recall painful experiences; but such a wide use is involved in relating what you passed through, and what was learned from that severe trial, that I venture to ask for a description. Tetanus is liable to befall any one, and as it is looked upon as hopeless of cure, and nothing is said in the books to show what the incipient stages are, because, of course, the physician is not called until the patient is actually engaged in the struggle with those horrid spasms, anything which will throw light upon this matter must be extremely important. Perhaps many lives are needlessly lost for lack of a knowledge of the approaching stages of tetanus, and of what measures to adopt *promptly*.

Doctor: It is indeed not delightful to live over again our distresses, and I am saved this by referring you to "How to be Well," for an answer to your request.

There is so little real knowledge of this most formidable affection, and the prescribed modes of treatment prove so unsatisfactory in their results that the practitioner is liable to yield to the irresistibly depressing influence of unsuccessful experiment, and conclude that his efforts must look only to palliation, not cure. To smooth the pathway to the grave is all the resources of the medical art are expected to avail. It is now my firm conviction that this position is not the true one —when the physician assumes that all is done that can be done. When the patient is helped to die easy, that physician becomes a dangerous adviser.

I am also convinced that the practice of meeting the alarming symptoms of this disorder with opiates and other disease-producing and death-inducing agencies, renders these cases hopeless of cure.

What this tetanus is I do not pretend to say. I bow my head awe-struck before the reminiscence of an experience which is here presented to the profession as a matter of medical interest, and to the people, with the hope of giving some information as regards the incipient stages in particular of this disease.

In the month of March, 1871, I stepped upon a nail, which pierced my right foot just at the side of the hollow, making a wound perhaps an inch in depth. The nail was immediately removed, and as no great degree of pain followed, I looked for no unpleasant results; but during the day a something very hard to bear, but less defined than pain, induced me to resort to the hot foot-bath frequently, feeling that my sensations were in some way connected with this wound. At night my sleep was undisturbed, but on awaking next morning an extreme languor came over me. I could scarcely arouse myself, and, on looking out of my window, I wondered how people could walk and move about so briskly, I was so weary. My appetite was good; pulse normal, so far as I could judge. During that day the sense of weariness increased, and a strange apprehensive feeling crept over me.

At night my sleep was troubled, and morning found me unrefreshed. I felt as though under the influence of a subtle poison; at times during the day was drowsy, but always awoke more weary. That night I took a warm bath, followed by thorough rubbing, which was soothing for a time, but my sleep was much disturbed. I grated my teeth and moaned, and was restless. Next morning very sharp pains darted through my head, and limbs, and back. A decided increase of distressing symptoms all this day, with the same languid half-effort for relief. At bedtime I was put in the warm half pack and remained in it until nearly morning, as it induced sleep and forgetfulness of weary self.

Next day, which was the fifth since the occurrence of the casualty, I was almost incontrollably restless. With the sharp pains of the previous day was a desire to move continually from one room to another, and I walked all over the house.

On going up-stairs, I was obliged to rest frequently; my breath was short, and severe pain in my chest.

On having hot fomentations applied to the liver and chest, I found much relief for an hour or so, when the crampings returned and the fomentations were repeated.

This night the deeply-poisoned feeling or stupor, as if from inhalation of some noxious vapor, was so oppressive as to prevent sleep. With the approach of day, the whole system seemed alive to pain and restlessness. I felt compelled to walk about the room, but that very prompting to motion brought aggravation of the pain, which was most distressing.

I now found myself unable to prescribe measures at all likely to prove available, and so called medical assistance.

At that time I was not aware what my condition required, nor, from my knowledge of the symptoms of tetanus gathered from the books, did I decide this to be my disease, as I had so little information as to its incipiency.

But in a few hours there was no mistaking the diagnosis. A general spasm, accompanied with such suffering as pen can never depict, took place. The mind was clear, and the senses acute much beyond what was normal. It seemed as though the nerves were played upon by some terrible force which rasped and tortured them in every imaginable way. At times it was as though the spirit were struggling to leave the body, but was prevented by something which delighted to inflict the most exquisite torture far exceeding anything physical. The stiffening jaws closed with a motion quicker than thought.

The diaphragm held firmly, all the muscles of the chest cramped, the head pushed back, and the body fairly lifted from the bed by the awfully rigid muscles. The brain and spinal cord seemed twisted and intertwined as with little hot wires, the abdomen and lungs held so tightly by the resistance of the diaphragm, the inability to swallow, producing the sensation of pressure as though a hand were grasping the throat, together with the fearful feeling of being pulled to pieces by the stretching of the awfully rigid muscles, led me to exclaim whenever speech was possible, "Come, do come; they're pulling me, they're pulling me." I felt as though a giant were at my head, and with hot iron hands was pressing my brain, while at my feet was another giant trying to pull me away, and at every muscle, and nerve, and fiber of my body was a wicked little imp pinching me, and twirling sharp burning wires.

The nerves of sensation were so *vivid*, so alive to the condition, that the impression of being in the power of some torturing creature was most fearful, and I felt that I could not be rescued from my suffering until death came.

"Though death be poor, it ends a mortal woe."

I now refer to a letter from my physician, Dr. Glass, of Hannibal, Missouri, under whose medical care I placed myself at this time, and to whose skill and ability I am able to bear *living* testimony:

"DR. FAIRCHILD:—In reply to your request, I would say, that when called to assume charge of a case of traumatic tetanus as presented in your own person, it was the first which had come under my medical care in a practice of over thirty years.

"I had seen cases in the hands of physicians who administered opiates, and the patients died, I verily believe, from the effects of the drugs, and at the same time I do not say they would have recovered under different treatment. They certainly would have 'stood a better chance' for recovery.

"What was I to do?—the books gave such sorry comfort. After prescribing a most formidable array of stimulants and opiates, each individual remedy was pronounced unreliable, and simple palliation seemed all that the resources of the medical art could accomplish.

"I had the idea, gathered perhaps from the opinion of some medical writers, that the system in this disease is oppressed from the effect of subtle poison, as that of a dissecting wound. The small deep wound was closed upon by the thick tissues of the foot, and an infinitesimal amount of decayed flesh, it might be, was retained, and thus poison was pervading the body. I made a deep gash through the wound, and plunged into this a stick of caustic potash.

"This relieved the spasm to some degree, and I afterward repeated the caustic burning, as you remember, even until and during convalescence, months afterward.

"I saw that relaxation must be produced. How? At first, blankets were wrung from hot water and used as a general fomentation; but there was one condition which would not ad-

mit of any such appliances, strange as it would seem. The very small degree of motion, or change of position necessary, induced greater severity of the spasm. Even the moving of the light bed-cover did this. And so I resorted to what in my days of drug practice I handled very skillfully—lobelia. I made a weak decoction of the seed of lobelia, and administered it as enema, not allowing it to pass off for some time. In this way nausea and relaxation were induced, and during twenty-four hours at once I kept you very much nauseated, so that retching was induced; for as soon as this was allowed to abate, the frightful and distressing spasms would assert themselves with extreme severity.

"Rubbing, which seemed to those at your bedside must prove grateful, was, on the contrary, an aggravation of the paroxysms. At no time was the spasm entirely in subsidence, though it was much lighter than at others. At the end of ten days from the time I was called, and I believe the casualty occurred about seven days before that, decided evidences of convalescence appeared.

"The spasms less severe, and more easily controlled. But then came those distressing nervous symptoms from which you suffered, which no one can describe so well as yourself.

"I will close by saying, what you already know, that since then I have been repeatedly called upon to give my plan of treatment in such a case. Here it is. I would do as I did in yours—open the wound, and keep it open by using caustic, then produce relaxation. Use lobelia, if that is more convenient than the full hot bath or hot fomentations.

"Full enemas of weak lobelia-seed tea, and smaller ones, alternate. Then *quiet* and good care."

My convalescence was attended with suffering almost as great as the spasmodic symptoms. The whole nervous system seemed, as a medical friend said, "raw," or as though the nerves were on the outside and without protection. I felt as though everything were acting on me; I, a prey to all my surroundings, could resist nothing. At sight of an envelope, pen, book, or even a piece of torn newspaper, I became quite distracted, and a slight spasm occurred. For many months I could neither read nor write. Anything suggestive of number, as the

mention of the time of day or date of the month, or the sight of a dish of rice on the table, or spoons in the spoon-holder, or a plate of crackers, was liable to bring most painful sensations, which would follow me for hours. Sound, too, produced equally unpleasant impressions. Always, on hearing the bells of the town ring, I caught up a pillow and pressed it tightly over the top of my head. I felt as though the undulations of sound caused like waves in my brain ; it was agonizing.

So exhausted nervously, a thought was tiresome. Poems, hymns, and passages of Scripture long before committed to memory, seemed right near, and one word, at quite long intervals, was all I could utter or even think of ; yet the feeling that they were somewhere in the memory, like living entities as it were, was very distinct and very comforting, as sometimes we feel the presence of a friend, though we may not have the assurance of sight. I so well remember that once the beautiful psalm which has the words, "The Lord is my Shepherd," etc., came to my mind, and I sought to repeat it, but could only say the first two words for a whole day, and several days elapsed before I could say the whole verse, yet those were delightful hours spent in the sphere which the presence of the Lord's Word always brings to our spirits.

Did I take medical treatment during this stage of convalescence ? Very little ; and that was what exactly suited my case,—what meets all these nervous cases—simple hygienic treatment, in which *remedial motion* is the prominent factor. I longed for the earth, the sun, the outdoor air. And when the sight of the countless blades of grass distressed me, I covered my eyes, and was placed where I could pat the ground with my hands and let the sun shine upon me and breathe the pure air. My food was of grains and fruit—mostly unleavened Graham bread or plain corn-bread, and such fruits as were relished. Very little different from my dietetic habits of years, and an allopathic physician of eminence declared it to be his conviction that my recovery was due largely to my temperate habits of living, which maintained my system in the most favorable conditions to resist the causes of disease.

I am taught by this experience very many valuable lessons regarding the morbid action of the nervous system, and have

been led to acquaint myself more and more with the physiology of the same, thus becoming enabled to select remedial methods, both as to kind and degree, which are peculiarly adapted to the needs of these nervous disorders.

Just enough treatment—a rule which must guide the practitioner and the patient. It requires more skill to decide when and what *not* to do, than to apply the most complete medical resources. All physicians know this ; but all have not the courage to combat the settled opinions of their patrons, hence too much treatment is much more liable to be given than too little. I am well assured that but few patients would be satisfied to receive no more medical treatment than was given me. I know that it was judicious selection *and correct quantity*, the two conditions, and not one, which would have a bearing on the case, and more treatment than I received would be harmful. This disease, not unlike all nervous complaints, is eminently one of exhaustion, and *rest, rest, rest*, is the prayer most importunate of the whole system.

CHAPTER XXIX.

HYGIENIC SIGNIFICANCE OF AIR.

Doctor: It is not difficult to perceive what would be the first essential for a physical being endowed as we find woman. It is health, wholeness. Second to knowledge of herself, is to know what health is, how always to keep mind and body in trim for work or play, ever ready to do and to enjoy. How to secure and retain that indescribable, keen sense of *living*, when to draw the breath is luxury; and to feel that consciousness of power which waits upon our daily care and toil, turns the severest tasks into pleasure, and insures the highest degree of human use and happiness.

Viola: That sounds very well; but it is so much easier to admire health than to possess one's self of it. A life of constant thinking and caring for the body, living according to certain set rules, weighing, measuring, nicely adjusting every material feature of the universe to the attainment of this one object, is surely paying pretty dearly for bodily rectitude; and you are not always sure of attaining your object even for all your trying.

Doctor: You are wrong. Health will never be attained in the *selfish seeking* for it, but rather in the *losing of self*, and the getting of understanding. Once a man took a long journey to ask a certain father of the church what rules to follow for right living; "Love, and then do as you like," was the reply. Should one take the trouble to ask me how to receive health, I would say, "Know—and then do as you like." I do not mean a soulless, lifeless, purely intellectual knowing, but an inspiring, living, abiding, *real* knowledge, leading to *action*, which is true charity. The one who knows and loves will shun evils as sins; if the laws of health are understood and loved, they will be obeyed spontaneously, and health is spontaneous—it is pervasive and natural as light and air.

The Uses of Air.

Doctor: Pettenkoffer says, "One of the incessant wants of man is air." "Do not object," he continues, "that air is something so light that it need not be taken into account. Respiration, the function by which atmospheric air is introduced into the lungs and enabled to fulfill its office in the system, is quite as important as digestion; and, in fact, digestion cannot be perfected without this source of animation, for nutritive material is unfitted to nourish the body, and to replace the worn-out material of the body, until suitable changes, which air alone is capable of performing, have been made. The physiological evidence of the paramount influence of proper aeration of the blood is readily acknowledged, and the inference that insufficient breathing of air, or the breathing of air that has been rendered impure, is highly damaging to the vital interests, is easily drawn, and confirmed by experience."

What are the four great purifiers of air?

Viola: Diffusion, dilution by winds, oxidation, and the *fall of rain.*

Doctor: The laboratory of the vegetable world might be added. It keeps the carbon-dioxide of the atmosphere within certain limits, as you know; plants absorb and appropriate it and give off oxygen. Were it not for each one of these three agencies, and for all combined, the impurities of the atmosphere would soon render it incapable of sustaining us. Cripple or limit the action of any one of these *three great agencies*, and vital interests of the system are at once made to suffer. This is well illustrated whenever ventilation is overlooked or neglected. The walls and ceilings of our houses present obstacles to the purifying powers of nature; knowing this, we should provide efficiently to counterbalance the disadvantage of living in houses. There are various sources of impurities in the air we breathe. I say air we *breathe, not swallow.*

Viola: I thought everybody breathed air. How can you say not swallow air? See, I open my mouth and fill my lungs, the air enters my lungs, not my stomach; it was drawn through the mouth and nose, and fauces, and windpipe.

Doctor: Which is the natural breathing organ, the mouth or the nose? You readily concede this function to the nose, for it is furnished with the means of preventing hurtful substances, which may be floating in the atmosphere, from reaching the lungs. The mucous lining of the nostrils is provided with abundant little hairs, which form, with the mucous secretion, a fine, moist brush, and in the passage of air over this, particles of dust are caught and held by it, ready to be expelled, not admitted into the air tube and the lungs. So

Natural Breathing

is nostril breathing. Breathing with closed mouth is one of the primary essentials of healthful living. The air which passes into the lungs may be perfectly pure, that is, "perfectly gaseous," and it may be a mixture of gases and solid particles, either mineral or organic, which have passed into the atmosphere. The purely gaseous substances will enter the passages of the lungs, and will there meet that wonderful surface covered with the most delicate tufts of blood-vessels, which stand up on the surface of five or six million air cells, through which the blood flows with great velocity. There the gases will be absorbed, and as the surface of the air cells is as much as from ten to twenty square feet (some think it much more), you readily understand the great rapidity and ease with which gaseous substances enter the blood. Now, the solid particles which are taken in with the air will, through nostril breathing, be lodged in the nose, mostly, if not entirely. If they do pass into the lungs, failing to be caught in the nose or mouth, they remain to decompose, dissolve, or become dislodged as sources of irritation. Particles taken with air through the mouth are swallowed. It is considered very certain that many of the *specific poisons* which abound at times in the atmosphere, such as arise from typhoid, cholera, diphtheria, scarlet fever, etc., emanations and evacuations, produce their first effect upon the mucous membrane lining the whole alimentary canal, having been brought in contact with this through swallowing. In malarious districts persons have withstood the poisonous atmosphere by paying strict attention to this fact of proper

breathing. This may be to mouth breathers a matter which will require much careful effort, but trained persistently by "little and little," correct breathing will become established as one of the involuntary actions of the system. The importance of this will be realized as we now come to consider

Sources of Atmospheric Impurities.

Viola: I have compiled some facts from various authentic sources to serve a useful purpose here. An immense number of substances, organic and inorganic, may be suspended in the atmosphere. From the soil, the winds lift finely powdered mineral substances, the *débris* of perished creatures who have lived in the atmosphere, and even animals of some magnitude are lifted from the surface of marsh water by occasional force of evaporation; then the *débris* of vegetation passes up, pollen, spores of fungi, *mycoderms*, etc., which grow in the atmosphere, and innumerable volatile substances or odors. The germs, also, *vibriones*, *bacteria*, and *monads*, are largely present, and small eggs of various kinds. There is no reason to doubt that various organic substances, dried in the ground and finely pulverized, may be lifted into the air by winds and may be carried to great distances. In this way it is believed that some diseases may be propagated.

Doctor: Closets where soiled clothing is kept are sources of air impurities, and even of infection. No articles used about the bed or persons of the sick should be thus stored away or allowed to remain in the house. Kitchen closets, sink closets, where soiled dish-cloths and towels are tucked away, are sources of diphtheria, scarlet fever, and other malignant diseases.

Suspended Matters in Rooms.

Viola: Those in rooms not perfectly ventilated, inhabited by healthy persons, are scaly epithelium. Round cells like nuclei, portions of fibers, cotton, linen, wool, portions of food, bits of human hair, bits of wood and coal, can be found, in addition to the bodies that are present in the external air. In some cases articles of furniture may furnish certain substances; wall papers, colored green by arsenical preparations, give off

little particles of arsenical dust into the room. Hence, I should say such papers are unfit for use.

In sick-rooms, the air is contaminated by abundant exhalations from the bodies, and by the effluvia from discharged secretions, in *addition* to what is found in the external air, and to what is added by respiration, which is a source of impurity. An adult man in a state of repose, gives off in twenty-four hours from twelve to sixteen or more cubic feet of carbon-dioxide, the most of it from the lungs.

Organic matter is given off from the skin and lungs. This must be partly suspended, and is made up of small particles of epithelium and fatty matters detached from the skin and mouth, and partly from an organic vapor given off from the lungs and mouth. This is nitrogenous ond oxidizable. It has a very fetid smell, and this is retained in a room for so long a time, sometimes for hours, even when there is free ventilation, as to show that it is oxidized slowly.

Doctor: This is made plain to every one by common experience. Go into an unventilated, close sleeping-room, or any other unventilated apartment, and the presence of something besides pure air will be quickly detected by the sense of smell. Our churches, public halls, and school-rooms give sickening evidence of this. This organic fetid vapor is supposed to be in combination with water, as substances the most capable of absorbing water readily seem the most thoroughly affected by it. It is absorbed most by wool, feathers, damp walls, and moist paper, and least by straw and horse-hair. The color of substance influences its absorption. Black absorbs the most, and white the least.

Viola: Is this matter of which you are talking a gas?

Doctor: No. It is probably not a gas, but is molecular, and floats in clouds through the air, as the odor is evidently not always diffused through the room.

Viola: What important practical lessons may we draw from this fact? In the furnishing of our homes regard will be had to the hygienic teachings here given. Woolen carpets and feather-beds for sleeping-rooms will surely no longer hold a very high place in the favor of those persons who are instructed in these matters.

Combustion.

Doctor: It is said that one lamp consumes as much oxygen as seven persons. For the most part, the products of combustion and heating are allowed to pass out into the atmosphere at large; but lighting allows these to be diffused in the room, and they are deleterious gases. So of tobacco smoke. It contains particles of nicotine, or its salts, and probably of picolene bases. There is also much carbon-dioxide, ammonia, and butyric acid.

How far these substances remove from the air we breathe its purity and life-sustaining power! What violations of the Golden Rule are practices which compel those about us to inhale an atmosphere so ruinously poisonous.

Viola: Effluvia from sewage matters, and air of cess-pools and sewers, poison the air. The air of churchyards and cemeteries contains, by the decomposition of bodies, a very large amount of carbon-dioxide. Ammonia and an offensive putrid vapor are also given off. Fungi and germs of infusoria abound. Here is good reason why those who have deceased friends should restrain the morbid desire to remain long near where the decaying body is laid. Instances are known where visits to the cemetery were followed by serious illness, and in some cases, death. But who ever suspected the cause?

Doctor:

The Air of Towns

is bad enough. It is made impure from a variety of causes—respiration, combustion, effluvia from the soil, from night vaults, slaughter-houses, and various trades, to say nothing of cess-pools and sewers, of alley accumulations, and all manner of street filth. Were it not for the great pile of air ever in motion, tending continually to dilute and remove these impurities, the heavier particles to become deposited, human existence could not be sustained in towns. What a difference there is between closed and open spaces in a town or city, and this shows the necessity of providing abundantly of squares and parks throughout every place that now is, or is likely to become, densely populated. The great powers of nature are

thus left comparatively unobstructed, and will keep atmospheric impurities within the line that is not greatly injurious to health. Let the winds, the rain, and the sunshine have free access and full play everywhere.

Viola: *Gas combustion* yields products which, if breathed for any length of time, are quickly manifested in the pallor, headaches, heaviness, and general want of tone thus induced. I should think it, then, a bad practice to allow a light to be left burning in a sleeping-room during the night.

Doctor: It is a very damaging habit, for the reason you suggest, and for other reasons which might be given. I always enforce upon patients the excellent rule, "Put out your light, then go to bed." *But what is to be the standard of purity in dwellings?*

Viola: We cannot demand that the air of an inhabited room shall be absolutely as pure as the outside air, for nothing short of breathing in the open air can insure perfect purity at every respiration. In every dwelling there will be some impurity of air. Without attempting too much, it may be fairly assumed that the *quantity of air supplied to every inhabited room should be great enough to remove all sensible impurity;* so that a person coming in from the external air *should perceive no trace of odor, or difference between the room and the air outside in point of freshness.*

In sick-rooms and hospitals unusual provision should always be made; in fact, the supply should be unlimited. In some diseases such an amount of organic substance is thrown off (as before mentioned) that scarcely any ventilation is sufficient to remove the odor. Even temperature must be sacrificed to a considerable extent in order to obtain fresh air, if a choice requires to be made between the two.

Doctor: By ventilation, then, it would seem, we mean "the problem of the removal of the excreta of the air." And this problem is solved:

1st. By the forces in nature continually acting, which produce what has been termed natural ventilation.

2d. The forces set in action by man, which produce the so-called artificial ventilation.

Three forces act in natural ventilation, namely, *diffusion*, *winds*, and *the difference in weight of masses of air of unequal temperature*.

First. *Diffusion.* As every gas diffuses at a certain rate, namely, inversely as the square of its density, there is a constant escape of any foreign gas into the atmosphere at large. From every room that is not air-tight, Pettenkoffer and Roscoe have shown that diffusion occurs through brick and stone. Is the amount of purification produced by diffusion under ordinary circumstances sufficient?

Viola: As a general ventilating power, it is inadequate, because organic substances, which are not gaseous, but molecular, are not affected by it.

Doctor: Second. *The action of the winds* is a very powerful ventilating agent. If the wind can pass freely through the room with open doors and windows, the effect it produces is immense.

Third. *Unequal weights of air* is a power in ventilation, and may be looked upon as an independent force. If the air in a room be heated by fire or the presence of men or animals, or be made moister, it endeavors to expand; if possible, a portion will escape, and what remains will be lighter than an equal bulk of colder air outside. The outer air will then rush into the room by every crevice, until the equality of weight outside and inside is established. But as fresh air is heated as it comes in, the movement is kept up in a constant stream. This is the most useful agency in natural ventilation; in cold climates and in inhabited warm rooms, an arrangement should be made to allow it to act.

No particular arrangements are necessary to allow *diffusion* to act, except that there should be communication between two atmospheres. To obtain perfilation of the wind, windows should be placed in all cases, if possible, at opposite sides of the room. Various plans have been proposed, among the best are: First, the panes of glass may be made double, spaces being left at the bottom of the outside pane and at the top of the inside, so the wind is obliged to pass up between the two panes before it enters the room. Second, the lower sash may be raised, a piece of wood which fits closely placed below it, and

the air allowed to pass through the space left between the upper and lower sash.

There are several plans for artificial ventilation; but the best authorities seem to place the most reliance on natural ventilation. "*Incessant movement of the air is a law of nature.* We have only to allow the air of our cities and dwellings to take a share in this constant change, and ventilation will go on uninterruptedly *without our care.*"

Parkes says: "A notion prevails that cubic space may take the place of change of air, so that, if a large cubic space is given, a certain amount of change of air may be dispensed with, or less fresh air required. This is quite erroneous; even the larger space can only provide sufficient air for a limited time, after which the same amount of fresh air must be supplied hourly whether the space be large or small."

CHAPTER XXX.

WATER.

Doctor: Water, from the mere hygienic standpoint, is an element which enters so constantly and influentially into the physical life of every individual, that it is recognized as the foundation of all hygienic necessities.

Viola: Following the plan laid down by Parkes, we notice, first: Supply. This must be *liberal.* It is the inexorable demand of every man, woman, and child of humanity, individually and collectively. Simple as this may seem, the health, happiness, and highest development of the race depend upon a liberal supply of pure water. Water, you tell me, corresponds to *truth.* As truth is essential to the life of the soul, so water is to the body. People may laugh at what may be termed a "fancy," but I am helped as I thus look through "nature up to nature's God."

Doctor: In seeing things "spiritual from things natural," the soul is led more and more into communion with the real, the truth of life.

The unreal, the temporal gradually loses its power. Is not this a step, at least, in the regenerative life? Whatever teaches me of God brings me more into love to Him and for the neighbor, which I call *good.* But to our lesson.

What is a liberal water supply? Can a correct estimate be reached?

Viola: Yes. A liberal supply would be such an amount as meets the requirements of each individual member of a civilized community. These requirements are health, comfort, and use.

Doctor: It seems to me that this estimate is not much in error, being based on facts. Twelve gallons per head for all domestic purposes, and four gallons additional for general baths, and six gallons for water-closets. This makes twenty-

five gallons, none too much to pass into the sewer, for this is important as affecting the health. For sick-rooms there must be a large allowance for the extra amount for baths and closet flushing, and water consumption generally. This would increase the amount by ten or twelve gallons, perhaps more.

Viola: Collection of water comes next. We know it is naturally collected in hollows of the earth's surface, and these form ponds and lakes; rivers, brooks, and springs also are properly collections of water. The natural idea, then, for a collection of water, is a *reservoir.* This is variously acted upon by man. A wall is sometimes placed across a ravine; trenches are dug in a flat surface, or a large depression is made, surrounded by a strong wall. All these are reservoirs. Below the surface the water is collected by wells and cisterns.

Doctor: It is the

Purity of the Water

which claims primary consideration; in fact, it is the one which most nearly concerns this whole subject. The cleanliness and nature of the surface on which rain falls, the kind of ground under cultivation, and like points have to be considered. In the first place, there can be no question as to the need of keeping the reservoir clean and free from every source of contamination.

Doctor: Stone or brick, laid in hydraulic cement, is the *best* cistern. It should be deep, rather than wide. The brick or stone wall built four inches from the earth sides, and that space filled with cement as the wall is in course of construction. This prevents the ingress of underground waters. About four or five feet below the surface an arch is thrown over the top, leaving a "man-hole" in the center. A ventilating tube is here inserted. The conducting pipe should extend to the bottom, that the discharge may be from below. This secures more thorough agitation of the whole mass of the water, leaving no portion unaerated and stagnant. The overflow pipe should also reach to the bottom and end above ground, and a trap grating should be placed over it. In this way the portion of water where is the most sediment, is discharged first and the cistern becomes self-cleansing.

Viola:

WELLS ARE OBJECTIONABLE,

being liable to contamination from such a variety of sources, from under the ground and from the top of the ground. Wells are usually dug to a little below the level of the subsoil water, and of course drain the soil around for a greater or less distance. Consequently, the water becomes impure with foul matters from drains, cess-pools, vaults, soil pipes, etc. It matters not how bright and even sparkling the water of these wells may be, there always hangs over them the suspicion of impurity. Falkland says: "Even a chemical analysis cannot discover the noxious ingredient or ingredients in water polluted by infected sewage or animal excretion; and as it cannot thus distinguish between infected and non-infected sewage, the only perfectly safe course is to avoid altogether the use, for domestic purposes, of water which has been polluted with excrementitious matter. This is the more to be desired, because there is no practicable process known, whereby water once contaminated by infected sewage can be so purified as to render its domestic use entirely free from risk."

Doctor: River water is stored in large reservoirs and allowed to stand until deposit takes place, when it is filtered through beds of sand and gravel. This water is not free from contamination even to dangerous extent, in many places, for it receives the refuse and sewage of towns, also the drainage from large areas of cultivated and uncultivated lands. *Springs* and small streams provide supplies of quite pure water, especially if the surroundings are such as forbid pollution from surface washings or other sources of impurity.

Viola: Distribution of water should be closely attended to. Water is conveyed by aqueducts and pipes to houses, and the plans for easy and immediate removal of dirty water must be carefully secured. Conducting pipes are made of earthen-ware, masonry, or iron for the large ones; of iron, lead, tin, zinc, copper, or earthen-ware for the small ones. The best material for the large pipes is iron, and iron or non-metallic substances for the smaller ones. Lead pipes should not be used, because the water takes up a portion of the lead; even pure water does this,

and substances especially corrosive to lead often find their way with water, thus insuring double risk. If iron, tin, or zinc is in contact with lead, galvanic action is produced, rendering the solvent action of the water more marked. Bending lead pipes against the grain also increases the risk of solution. Zinc pipes, into the composition of which lead often enters, yield lead in large quantities.

Doctor: Cases of lead paralysis are recorded where but *one one-hundredth of a grain* in a gallon of water could be detected. Poisoning has also been caused by that amount. And so lead pipes should not be used, but wrought or cast iron ones instead.

Viola: Composition or quality of water is vastly important as affecting that used for cooking and drinking and bathing. Parkes claims the general character of good water to be "*perfect clearness, freedom from odor or taste, coolness, good aeration, and at least a certain degree of softness.*"

Doctor: These properties are obvious. We take them as our standard, and with it test first the *well water.* Shallow well water should be regarded with suspicion, the well being the natural point to receive the drainage of considerable surrounding land, and heavy rains will often wash substances into it. A shallow well is less than fifty feet deep. In a table given by the Rivers' Pollution Commissioners under the head of "Dangerous," is found classed, "river water to which sewage gains access, and *shallow well water.*"

Viola: In shallow wells, from four to thirty feet deep, the soakage from the ground is often very impure, especially in a town and any locality where the surface washings from barnyards, kitchen drains, vaults, and various other sources of contamination are liable to get into them.

Says Parkes: "It it shown that a well drains an extent of ground about it nearly in the shape of an inverted cone. The area must depend on the soil, but experiments show that the radius of the area drained is equal to at least four times the depth, and that it often exceeds this."

Prof. Anstead states that the deepest non-artesian well will drain a cone which is more than half a mile in radius. We are convinced that it is best not to use well water. What have you to say of springs?

Spring Water

may be either pure or impure, while the mere fact of its being a spring is not, as is often imagined, a surety of goodness. The impurities of the water are influenced by the strata through which it passes. This is the origin of the different mineral springs. Water falling as rain percolates the soil, and thus becomes charged with soluble mineral substances which it may chance to contain. Thus we get chalybeate, sulphur, saline, alkaline, and all the grades and sorts of mineral waters.

Doctor: River water, as has been said, varies so much in composition, it is difficult to decide as to its merits; but the general opinion, based on facts and analysis, is that it is very suitable for human use. The motion of the water in currents is undoubtedly one of nature's purifying devices. It is more generally available, perhaps, than water from the other sources, except

Rain Water.

The roof offering the surface from which the rain water is collected must be washed with rain, and the water excluded from the cistern by some device placed in the conducting pipe, until the surface is well cleaned and the water is clear, when it may be admitted to the cistern.

Aeration is important in both river and rain water, as simple exposure to the air is purifying to some extent.

Viola: Can impure water be purified? I suppose boiling it would destroy much impure matter. Fungous spores are killed by boiling, and much organic matter, as well as mineral, is thus got rid of.

Doctor: Filtering is a means of improving water, and a good filter of pure animal charcoal, at first, will completely remove both mineral and organic suspended matters, and even bring out water that is discolored, very clear; even dissolved organic and mineral matters are removed; but after a time *it fails to be efficient.* Experiments have awakened serious questions with reference to the efficacy of filtering, for it was found not only that the *action of the charcoal ceased*, allowing matters to pass through, but it *began to give back some of the organic mat-*

ter it had removed. Impure water may be improved by *boiling*, *agitation*, and *filtering*. I recommend the first.

"As to diseases caused by impurities in water," says Parkes, "it is not possible at present to assign to every impurity in water its exact share in the production of disease, or to prove the precise influence on the public health of water which is not extremely impure; yet it appears certain that the health of a community always improves when an abundant supply of pure water is given; and, apart from this actual evidence, we are entitled to conclude from other considerations that abundant and good water is a primary hygienic necessity."

CHAPTER XXXI.

SUNSHINE.

"I love the sunshine everywhere,
In wood, and field, and glen;
I love it in the busy haunts
Of town-imprisoned men.

"I love it where the children lie
Deep in the clovery grass,
To watch among the twining roots
The gold-green beetle pass.

"I love it on the breezy sea
To glance on sail and oar,
While the great waves, like molten glass,
Come leaping to the shore.

"I love it on the mountain tops
Where lies the stainless snow,
And half a kingdom bathed in light
Lies stretching out below.

"How beautiful on little stream,
When sun and shade at play
Make silvery meshes, while the brook
Goes singing on its way.

"Oh, yes! I love the sunshine.
Like kindness, or like mirth
Upon a human countenance,
Is sunshine on the earth!

"Upon the earth, upon the sea,
And through the crystal air,
Or piled up cloud, the gracious sun
Is glorious everywhere."

Doctor: Who does not love the sunshine?

Viola: The average American housekeeper, according to an editorial in the *Chicago Tribune*, quoted by Dr. Babbit in "Principles of Light and Color," which says: "In this country there seems to be an implacable feud between people and the sun, the one striving vigorously and even fiercely to get into the houses, and the other striving just as fiercely and vigorously to keep him out."

Doctor:

WHERE THERE IS SUN THERE IS THOUGHT.

All physiology goes to confirm this. Where is the shady side of deep valleys, there is cretinism. Where are cellars and the unsunned sides of narrow streets, there is degeneracy and weakliness of the human race, mind and body equally degenerating. Put the pale, withering plant in the sun, and if not too far gone, each will recover health and spirit.

Doctor: If mothers knew the value of light to the skin in childhood, especially to children of a scrofulous tendency, we should have plenty of glass-house nurseries, where children may run about in a proper temperature, free of much of that clothing which at present seals up the skin, that great supplementary lung, to sunlight and oxygen.

Exclusion from the sun produces the sickly, flabby, pale, anæmic condition of the face, and ex-sanguinal, ghost-like forms so often seen amongst those not freely exposed to air and light. The absence of these essential elements of health deteriorates by materially altering the composition of the blood, thus seriously prostrating the vital strength, enfeebling the nervous energy, and ultimately inducing organic changes in the structure of the heart, brain, and muscular tissues.

Viola:

"Thus were I moved to homage pay,
Or worship animated force,
I'd yield it to the King of Day
Who is of all I see the source."

Dr. E. Wellman, in Science of Health, 1875, says: "Animal organization, any more than the vegetable, cannot be fully and properly developed without sunlight in abundance. Animals may grow in the shade, but the finer fruits are found only under the direct rays of the sun."

The lower orders of life, the mushrooms, mosses, protophytes, the slimy worms, loathsome reptiles, predacious animals, vicious men, and rickety children, are to be found "seeking darkness rather than light;" the well developed, highly wrought, vigorous, and normal productions of nature are only produced and flourish in the light of day.

A tad-pole if deprived of light, instead of progressing into a respectable frog, will remain a tad-pole or degenerate into some monstrosity; just as we find the rickety and scrofulous, the vicious and criminal of our own race, in the dark cellars and slums of our cities; dull and stupid, and slimy things, that go forth at night to prey upon society. The better qualities of human nature are vivacity, sprightliness, hopefulness, cheerfulness, the keenness and nicety of sensation and perception, refinement, love of the beautiful, noble thoughts and pure feelings; and these flourish only under the influence of the light of day.

Since ancient times, sunbeams, torches, lamps, whatever dispelled darkness, have stood as a symbol of truth for mankind. Wonderful advancement has been made within two hundred years, in perfecting artificial lights and in utilizing the sunlight. And equally wonderful has been the discovery and reception of truths from the lowest plane of matter to the highest plane of mind and spirit.

"Color, throughout all nature, represents quality; and color is created, changed, modified, or improved by sunlight. High colors indicate corresponding qualities; delicate shades, delicate qualities; coarse tints, coarse qualities; and these depend largely on the amount of sunlight received. The idea is sustained by reference to animals and vegetables. Dark fruits are more strongly flavored; rich colors indicate rich flavors, etc. But of course the constitutional character is the chief exponent of colors and qualities; so that to find the influence of sunlight, we need to go to fruits or animals of the same stock, and compare those under the light with those deprived of it. Compare fruits raised under the direct influence of the sun's rays; compare men who move out of doors, and women who stay at home. Compare human beings everywhere who remain shut out from God's sunlight with those who have it in abundance, and mark the difference. Out-door life, which comprises abundant sunshine, is a great panacea for all ills, and a panacea that is cheap and easily obtained."

In like manner, we can say that the quality of truth in one's possession gives color to the character. As the quality of one's truth is elevated, the change is manifested in gentler feelings, clearer thoughts, and kindlier deeds—in an uplifting of the whole nature for the good of humanity.

Shelley's "Sun God" says:

"The sunbeams are my shafts with which I kill
Deceit, that love the night and fear the day;
All men who do or even imagine ill
Fly me, and from the glory of my ray
Good minds and open actions take new might,
Until diminished by the reign of night."

CHAPTER XXXII.

EXERCISE.

God and Man.

"The first physicians by debauch were made.
Excess began and sloth sustains the trade.
By chase our long-lived fathers earned their food;
Toil strung the nerves and purified the blood;
But we, their sons, a pampered race of men,
Are dwindled down to three-score years and ten;
Better to hunt in fields for health unbought,
Than fee the doctor for a nauseous draught;
The wise, for cure, on exercise depend;
God never made His works for man to mend."

—*Dryden.*

Doctor: One of the universal essentials to a perfect state of health is acknowledged to be exercise. This is a truth of every organ of the body, because each has a special stimulus which excites its action, and health results of necessity from the normal quantity and quality of this stimulus.

Viola: Is there not a narrower sense in which the word "exercise" is used, one that expresses merely the action of voluntary muscles?

Doctor: Yes, and it is equally necessary here, for all the organs are affected by it. The formation and circulation of the blood and its use in the system are profoundly influenced by the motion of the voluntary muscles, or muscular movement. Without this there could be no health.

Viola: Is muscular exercise necessary for a sufficient elimination of carbon from the body?

Doctor: It is true; and from established facts

There Flow Certain Rules.

The action of the lungs must be positively free; *not any impediment* must be offered to the freest play of the chest and the action of the respiratory muscles.

Julia: Why should rules be established upon facts which can have no bearing on one-half of the human race? It seems that women must be excluded from the benefits of exercise, because they cannot meet the requirements.

Look at us, imprisoned in corsets, ligatured about the waist with skirt bands, pinched with tight sleeves, tight gloves, tight shoes. But I own, like all the rest, I could not give up my corsets, though they are never tight, you know, but I could not sit up straight without them; they are such a support and strength to my weak back and stomach. And yet I hate to feel that a simple hygienic rule, which actually bears upon man and woman alike, may be to man a source of health and strength because he obeys it, while to women *must* come penalty in sufferings and weaknesses; for in disobeying it, she finds it impossible to take sufficient exercise.

Viola: Why not plan woman's dress in reference to these facts of the physical organism? Nature does not withhold from her the awards of obedience to hygienic law. Why not then "obey and live?"

Doctor: Woman will do this, as her understanding is sufficiently enlightened upon these matters, and her affections brought into harmony with the "sentiments of the useful, the *really* beautiful, the true, and the good."

Another rule is to allow more food in proportion as the amount of exercise is increased, and to decrease the quantity as less exercise is taken. The increase of carbon excreted during exercise makes an extra demand for food.

The body seems to demand water with great eagerness after severe exertion, and even during exercise, and yet it is thought dangerous to drink water then. This is

A Mistaken Notion.

The truth is that water is an absolute necessity during and after exercise, and, taken in small quantities and frequently, is entirely safe, as in that way the too rapid purge of cold water into the stomach and blood is obviated.

Animals, and especially horses, are often made to suffer from the erroneous idea that they must be deprived of water

during exercise. This is all wrong; they may safely be allowed to drink frequently, even when very weary and sweating from prolonged and hard work. I would now inquire, what are the general effects of exercise on the body?

Viola: It increases oxidation, increases the rapidity of the circulation everywhere, as well as the pressure on the vessels. Therefore, it causes in all organs a more rapid outflow of plasma and absorption, in other words, a quicker renewal.

In this way, also, the products of action which accumulate in organs are removed. And the power of action in the various parts of the body is restored. It increases the outflow of warmth from the body by increasing perspiration; therefore, oxidation strengthens all parts.

The amount of exercise which a man or woman should take is scarcely to be determined; yet I have seen it stated somewhere that the amount of work which should be accomplished daily by a healthy person is estimated as equivalent to a walk of about nine miles.

Of course, in the ordinary business of life, it is not possible to lay down rules to meet all cases; but any one may fix about the necessary amount of work with tolerable accuracy.

Viola: There is a class of persons who, by specific exercises, develop their muscular powers to a very high degree. Allow me to read this from Parkes: "The aim of the trainer is to increase breathing power; to make the muscular action more vigorous and enduring, and to lessen the amount of fat. He arrives at this by a careful diet, by regular and systematic exercise, and by increasing the action of the eliminating organs, especially the skin. What the trainer thus accomplishes is in essence the following: 'A concordant action is established between the heart and blood-vessels, so that the strong action of the heart during exercise is met by a more perfect dilatation, and there is no blockage of the flow of blood. In the lungs, the blood not only passes more freely, but the amount of oxygen is increased, and the gradual improvement in breathing power is well seen, for instance in horses, when watched during training.

This reciprocal action between heart and blood-vessels is the most important point in training. The nutrition of the

nerves and muscular fibers improves from constant action and the proper supply of suitable food; the tissue changes are more active, and elimination, especially of carbon, increases, and a higher degree of health ensues."

Doctor: To a great extent every individual may be a trainer, and should be.

CHAPTER XXXIII.

SLEEP.

Doctor: How may the too rapid expenditure of vital force be prevented?

Viola: By a condition which takes place in every animal of a perfect kind—sleep.

Julia: Even plants sleep. How the little leaves and flowers fold themselves up and go to sleep. It is said that "every hour in the day has some plant which then shuts itself up, and on this, is founded what is called the plant dial." And do not the trees sleep all winter?

Doctor: A philosopher has said: "Take from man hope and sleep, and he will be the most wretched being on earth." Nothing can compensate for the want of sufficient sleep. How old and energyless we feel, incapacitated for work or play, when sleep is denied! What do you learn of the physical effects of sleep? Consult Hufeland.

Viola: It retards all the vital movements, collects the vital power, and restores what has been lost during the day; it separates from us what is useless and pernicious. It is, as it were, a daily crisis, during which all secretions are performed in the greatest tranquillity, and with the utmost perfection.

Continued Wakefulness

unites all the properties destructive of life; incessant wasting of the vital power and of the organs, acceleration of consumption and prevention of restoration.

Julia: How many hours is it necessary to sleep? I often wish it were not a requirement of nature that we should sleep at all, for it seems like so much waste of time, and to go to bed before midnight is perfectly awful. Just the time everybody is in the height of enjoyment, and one feels so stimulated and bright then. I am so glad the customs of society forbid the

adoption of Wesley's motto, "To go early to bed and early to rise," even if we do fail to become "healthy and wealthy and wise." One thing, if you feel languid you can sleep in the day-time, and that answers just as well, for it makes no difference when you sleep.

Doctor: Not less than eight hours' sleep is a good average for adults; children need more, and the early part of the night is best for sleep. I have often said that if a go-to-bed-early rule could be enforced throughout all christendom there would follow such marvelous improvement in health, such security from the invasion of evils which now infest society like birds of the night, that millennium would be declared right now. Only think of "a whole city full" of people asleep by nine o'clock! What a great reformation this would be, at the same time so peacefully revolutionary. "The value of sleep to brain-workers cannot be exaggerated. In a recent lecture Dr. Malins, a famous English physician, said that the brain requires twelve hours of sleep at four years old, gradually diminishing by hours and half hours to ten at fourteen, thence to eight hours when the body is full grown and formed. Goethe, in his most active productive period, needed nine hours, and took them; Kant—the most laborious of students—was strict in never taking less than seven. Nor does it appear that those who have systematically tried to cheat nature of this chief right have been, in any sense, gainers of time for their work. It may be a paradox, but it is not the less a truth, that what is given to sleep is gained to labor."

Viola: Hufeland says: "Many believe that it is entirely the same if one sleeps either in the night or the day-time. People give themselves up, therefore, at night as long as they think proper, either to study or pleasure, and imagine that they make everything even when they sleep in the forenoon those hours which they sat up after midnight. But I must request every one who regards his health to beware of so seducing an error. It is certainly not the same whether one sleeps eight hours by day or by night; and two hours' sound sleep before midnight is of more benefit to the body than four hours' in the day. My reasons are as follows: That period of twenty-four hours, formed by the regular revolution of our earth, in which all its inhabitants partake, is particularly distinguished in the physica[1]

economy of man. This regular period is apparent in all diseases; and all the other small periods, so wonderful in our physical history, are by it in reality determined. It is, as it were, the unity of our natural chronology. Now, it is observed that the more the end of these periods coincides with the conclusion of the day the more is the pulsation accelerated; and a feverish state is produced, or the so-called evening fever, to which every man is subject. The accession of new chyle to the blood may, in all probability, contribute something towards this fever, though it is not the only cause, for we find it in sick persons who have neither eaten nor drunk. It is more owing, without doubt, to the absence of the sun, and to that revolution in the atmosphere which is connected with it. This evening fever is the reason why nervous persons find themselves more fit for labor at night than during the day. To become active, they must first have an artificial stimulus, and the evening fever supplies the place of wine. But, one may easily perceive that this is an unnatural state, and the consequences are the same as those of every simple fever: lassitude, sleep, and a crisis by the perspiration which takes place during that sleep."

Therefore, it may be said with propriety that all men every night have a critical perspiration, more perceptible in some and less so in others, by which whatever useless or pernicious particles have been imbibed by our bodies, or created in them, during the day, are secreted and removed. This

Daily Crisis

necessary to every man is particularly requisite for his support, and the proper period of it is when the fever has attained to its highest degree, that is, the period when the sun is in the nadir, consequently midnight.

What do those, then, who disobey this voice of nature which calls for rest at the above period, and who employ this fever, which should be the means of secreting and purifying our juices, to enable them to increase their activity and exertion?

By neglecting the critical period, they destroy the whole crisis of so much importance; and, though they go to bed towards morning, cannot certainly obtain, on that account, the

full benefit of sleep, as the critical period is past. They will never have a perfect, but an imperfect crisis; and what that means is well known to physicians. Their bodies also will never be completely purified. How clearly is this proved by the infirmities, rheumatic pains, and swelled feet, the unavoidable consequences of such lucubration.

The necessity of wholesome sleep cannot be made too emphatic, so that all the essential means for its attainment will bear repetition. During the day we digest and elaborate the materials of nutrition; but assimilation, the formation of tissue, only takes place during sleep, when the external senses are in repose. Dietetic and other habits influence the quantity and quality of sleep. Gross, indigestible, and stimulating, food heavy or late suppers, etc., necessitate a longer time in bed, for the reason that the sleep is less sound. And for the same reason, nervine and stimulating beverages, as tea and coffee, prevent sound and refreshing sleep, and thus wear out the brain and nervous system prematurely. Those who are inclined to be restless, vapory, or dreamy during the night, should take no supper, or a light, early one.

Repose is necessary for our muscles and organs, and that can only be obtained during sleep. Even that constant, ever-throbbing, hollow muscle, the heart, gets a rest; it beats more slowly, and the body lying horizontally, less force is required to keep it beating. The force saved is used to repair other parts.

Sleep should be taken early in the night if possible; thus we do away with the bad effects of artificially lighted rooms. There is another reason, and that is, the earth goes through some magnetic wave, beginning at nine at night and ending about three in the morning. The eyes suffer more if used in artificial light, and one who labors at night will go through a whole summer in this way, which is not necessary for those who employ the morning.

It seldom occurs to us that a great part of our lives is spent in the bed-chamber; there is nowhere we remain so long, and hence the necessity of having that apartment very free from any unhealthful influence. It must be clean, well ventilated, capable of admitting sunshine, and warm enough to be free from

chilling dampness at all times; beds aired every morning, windows thrown open wide, and the bedding distributed all about the room for an hour or two. Exposing bed and covers to direct sun rays gives them a sweet odor, very delicious indeed, and promotive of quiet rest and sleep. Night-clothes must be subjected to a daily airing, and never rolled up and placed under the pillow, but hung in an airy place for the day. The night vase *must be always covered* when in use, and when the cover is lifted, place it on the floor *top down.* Observe this habit, for the evaporation of bodily excretions poisons the atmosphere, and hence engenders disease. Lie quite flat in bed, head very little raised, on a hair pillow.

Julia: Hufeland further says: "And, lastly, those who spend the night in labor, and the morning in sleep, lose that time which is the most beautiful and the best fitted for labor. After every sleep we are renovated in the properest sense of the word; we are, in the morning, always taller than at night; while at night our bodies are drier and more exhausted, and the properties of old age then prevail. One, therefore, may consider each day as a sketch in miniature of human life, in which the

MORNING REPRESENTS YOUTH;

noon, manhood; and evening, old age. Who, then, would not employ the youthful part of each day for labor, rather than begin his work in the evening, the period of old age and debility? In the morning all nature appears freshest and most engaging; the mind at that period is also clearest, and possesses most strength and energy. It is not, as at night, worn out and rendered unequal by the multifarious impressions of the day, by business and fatigue; it is then more original, and possesses its natural powers. This is the period of new mental creation, of clear conception, and exalted ideas. Never does man enjoy the sensation of his own existence so purely and in so great perfection as in a beautiful morning. He who neglects this period neglects the youth of his life."

Viola: "The early morning is representative of a state of peace and innocence; for a state of peace in heaven is like the state of the world when the day is dawning. The night is

past; the light is gilding every object; the dew or frost is sparkling, and man rises, fresh, strong, and vigorous, to the life of a new day."

It is a law of the spirit that the first state enters into all succeeding ones, so while we are fresh, recreated, as it were, after the state of passivity, it is best on all planes of life to begin work early in the morning.

> "God has set
> Labor and rest, as day and night, to men —
> Successive."

CHAPTER XXXIV.

OPEN SESSION: SOMETHING ABOUT MANY THINGS.

Doctor: We often say a "scrap dinner" is the most enjoyable one of the week. Such is the character of our to-day's lesson.

SICK HEADACHE

first claiming attention. Sick-headache, biliousness, bad breath, bad taste in the mouth, etc., belong to one family of gastric complaints, very easily overcome through right means, and as surely fastened upon the constitution by means wholly at variance with the interests of the vital domain, as are drug remedies and continuance in unphysiological habits of living. Not to go into detail, I will say that a case of sick headache, biliousness, etc., may be treated successfully without a particle of drug medicine.

Hot foot-bath first, then free drinking of hot water, full enema, and lie down with fomenter over liver and stomach, and either hot or cold cloth to head, whichever is the more agreeable. The main effort is to get rid of an offending presence, hence assist the system in its effort to establish health. Two meals a day, simple hygienic living, and obedience to the laws of life will insure against this unwelcome disorder. In a word, "pure living and high thinking" contain great possibilities.

Viola: MALARIA

has become so prevalent, everybody is affected. What is malaria?

Doctor: Poison, no doubt; and that is enough for us to know for all practical purposes.

Would you cure it by adding "more of the same sort?" A case of malarial fever may be successfully treated by the same

course pursued in typhoid fever. As to the malarial habit. It is simply a case of slow poisoning, to the end of a long chapter of chronic afflictions.

Purify, invigorate, live out of and above malarial conditions, whether mental or physical. Persons go about as walking marshes giving off malaria. Their minds full of malarious thought, their bodies must respond accordingly.

Let such welcome the sunshine, and all of nature's kindly forces. Malaria will have no influence on a system well fortified with good blood and nerve-force.

It is now ascertained that the white blood corpuscles when in health have the power to overcome bacteria; corpuscles are like warriors, and become conquerors over the enemy.* So it would follow that our first aim should be to preserve the vital organism in its integrity, and let the powers within have free, unobstructed play.

Miss Anna R.: I came to the open session on my crutch, my sprained ankle gets no better. The curve in my spine actually increases. I have been encased in a plaster jacket for months at a time, during the last five years. I long for relief.

Doctor: Long for enlightenment, dear girl. Your spinal trouble began as mere weakness. Muscles on one side the spinal column were not able to resist the action of stronger ones on the other side, and so the vertebral pile bent in direction of the stronger—and a curve resulted. Now, what but to tone up the whole system, and give *special* attention to weaker parts, bringing about harmony?

Miss Anna R.: Oh, I understand. How useless, then, the tortures endured under treatment by jackets, electricity, stretchings, scarifyings, etc. How *can* these measures strengthen the weak muscles or help the general system? I ask. And my poor ankle—

Doctor: "Never too late to mend." The sprain is now capable of being overcome to great extent, if not wholly. Treat it as though a recent sprain. Put the foot in *hot* water, hold it

* The Cellulo-Microbian Warfare.—M. Metschinkoff has made researches on transparent animals, and announces that the white corpuscles of the blood combat injurious microbes that invade the system. As long as the body is in health they are successful in the contest, but if their vigor is impaired then disease is rampant. Our standing army of protective cells he calls "microphogi" and "macrophogi."

there three minutes, then dip it in cold water—several times, again place it in hot water for two minutes, when dip in cold, and rub well while holding it under cold water. Continue these alternate hot and cold applications for fifteen or twenty minutes. Rub well dry, and wrap in a linen cloth wrung from cold water. Cover it with dry flannel. Two or three times a day, give this attention to the afflicted member.

At bed-time, after the hot bath, wrap in the compress and let it remain during night. Friction to adjacent parts, and light strokes over those most affected, are useful. And know that the healing power within is your hope. Relate yourself rightly to the uplifting forces, and think of *power*, not lack of it. Just as in a bump or hurt of any kind. See the effect of petting an ill, when a child tumbles and gets bruised. Treat it as of no consequence, and child soon becomes happy and the hurt goes; but impress that child with the feeling of great injury, and results follow in accord with the impression.

Hot water applied to bruises and sprains as a physical measure, then assurance that "all will be well" meets almost any such exigency.

Even lumbago, that torment to the back of even stout people, will yield to applications of heat, and to brisk friction. When it becomes chronic, of course, more persistent hygienic measures are essential to a cure; but for one to sit down and give up the ghost of a chance for recovery from lumbago is deliberately *choosing* ill rather than good. This is a species of rheumatism, and will be cured by *curative* natural means and *trust in God*, quite beyond present expectation.

Says Dr. Robert Walter: "To be successful, either as physicians or patients, we must constantly revert to the principle that it is nature that cures. This is the only way to a correct faith; and faith is one of the most important agencies in the cure of the sick. It is at the bottom of all remedial efforts or appliances. Whoever believes he is going to die, is surely in the road toward death; while he who believes he is going to get well, is equipped with a mighty power and will do vigorous battle.

"But our faith must be in nature and in nature's God. If we place our reliance in our works, we will be sure to overdo; but

if in nature, it will give us that patience that is so necessary to success. As long as we place our hope in drugs, we will continue to poison ourselves until recovery becomes impossible; if we believe in water as the great cure-all, we are liable to be drowned out with water; if diet is going to cure us, we may diet ourselves into the minutest shade of a shadow, and pass out of existence just as we suppose that health is about to perch upon our standard; if air or sunlight, or exercise or rest is the basis of our faith, we may stretch our lungs to the capacity of a balloon, or roast in the beams of old Sol, or pass our days in the stupor of inactivity; whatever we do, excess of effort will characterize our attempts as long as we have faith in our works. The wise preacher exhorts the sinner to have faith in God, and throw away his own righteousness as filthy rags; so the wise physician will instruct his patient to have faith in his own recuperative powers, while the treatment given is worthless without these powers.

"'But faith without works is dead.' No man need hope to recover who is not in the way of health. While he indulges bad habits, follows evil methods, or lives in listless idleness without reference to the propriety of his course, he may consider his faith to be dead indeed. As it is not the hopeless invalid that recovers, so it is not the careless one. To *work* and to *wait* is the Alpha and Omega of hygienic treatment. Fingering the pulse, examining the tongue, and writing a prescription in dead Latin is not sufficient to cure sick people. Something more is required on the part of every skillful practitioner, and more still on the part of each patient.

"Hygienic treatment is a successful process; it is a practical application of sound principles, requiring strength of will, determination, energy on the part of the physician; and it is a self-denying effort on the part of the patient, such an effort as must develop in him all the better and nobler qualities of character.

"And waiting is quite as important as working. After the physician has done all that can be done, the patient is yet in difficulty if not in danger. The vital powers have not had time to restore normal conditions; there is nothing to do but to *wait.* Banish long faces, discontent, and murmuring; speak cheer-

fully and hopefully; observe quiet and freedom from anxiety; allow no croakers or timid persons about, but cultivate a spirit of self-helpfulness and self-respect. Because a patient is weak, do not feed him on brandy; because he is nervous, do not give arsenic or quinine; because he is irritable or sleepless, do not give him anodynes; if his bowels are torpid, there is no need of tearing them with drastic purgatives; no need of feeding him with calomel or any other abomination.

"Nature is sufficient to her own needs, all that is to be done is to supply her with what she wants and let her alone. *She never asks poisons*, but only pure air and water, sunlight, good food, rest, sleep, exercise, etc., in such manner and degree as she can use."

Viola: The ladies may infer that you would never have them call physicians.

Doctor: Oh, no. Do not discard the physician who does the best he can for you. He answers *your* demand. When you would do better than shut your eyes, and swallow, and even *insist* upon swallowing, your good doctor will be happy, perhaps turn surgeon, and let *you* become wise in ways that will not only prevent sickness, but *cure* it, also.

Julia: Speaking of surgery, I wonder why doctors have such a passion for cutting us all to pieces these days? It is a fashion. Ladies think they have not done quite all that is required to immortalize themselves, unless they can relate an experience of cutting and bloody horror, which was enforced upon them by their medical attendant.

Viola: So high authority as Dr. J. J. Garth Wilkinson says: "A sacred condition of surgery is that it be really the last resort of treatment; the *ultima ratio* after every other means has been exhausted.

"The knife-man and the trephine-man is the executioner in disease; woe be to him in the long-run if his verdict and his axe and block precede a fair trial. This means that he must be able and willing to employ every method first, before proceeding to operation. Be the means orthodox or heterodox, loved or hated in his clique, he is bound to know them, to have learned their experience not in the school of pooh-poohing, to dare to command their trial, and to wait upon its results.

The whole circle of things that promise or gain any success in healing without operation, must be acceptable and welcome to him. In short, his knife must be regarded by himself as a melancholy autocrat, which every executioner ought to be; but the way to him barred by all the gentle and merciful arts of Medical Religion; and the plea and practice of every one of these must be entertained and tried before any one's flesh and blood are given over to the steel Shylock."

Doctor: In the present disorderly state of society, surgery has not undergone regeneration, and we find the knife "marching to battle against the body" amid noise and glare of daring feat and proud attainment by unquestioned — experimenters; and no remarks are in place, *whatever the result.*

But this state of things is not enduring, and will pass away as medicine parts company with superstitious love of mystery, and ceases to enjoin "closure of the eyes and ears" to the attractions and voice of reason and nature. Surgery is beneficent, *in its place.*

Julia: What of patent nostrums which take the place of regular medicines, and save doctor bills?

Doctor: They are *wholly inadmissible.* If it is desirable to take drugs, let it be done under advice and direction of a good physician. Such an one knows what is suitable under his methods, and is responsible. The patent medicine assumes no responsibility. Life is too precious to be thus tampered with.

Mrs. Mann: Why do people take medicine? I ask.

Doctor: Dr. Crofts, in the *British Quarterly Review*, explains:

"It is to be feared, that, to most people, medicine is not an erudite science, or a learned art, but is little more than the commonplace administration of physic. They cannot understand medicine without drugs, and its virtue and power are popularly measured by the violence of its operations. Its very name is, in ordinary parlance, synonymous with physic. Take from it pills and potions, and for them you take away its whole art and mystery. They do not believe in a scheme of treatment, however deep-laid and skillful, which does not include a certain statutory dosage; so that, as a rule, medical men are practically

compelled to give their patients a visible object of faith in some form of physic, which may be at most designed to effect some very subordinate purpose. And it is remarkable how strongly, even among the educated classes, this feeling prevails. Cure by the administration of mixtures and boluses is so fixed and ancient a tradition, that it is only very slowly that the world will give it up. The anxiety of the friends of the patient wants to do more than follow the simple directions of 'nursing,' which have been so carefully inculcated, and possess, apparently, so little remedial power. There is nothing of the unknown about them in which a fluttering hope of great advantage can nestle. Thus it is necessary to educate the world into a belief in medicine apart from drugs, which finds its power of curing in adaptations of the common conditions of life, and applications of physiological facts,—a medicine which takes into its hands the whole life, and orders and fashions its every detail with scientific definiteness. It is found in every-day practice that this popular misunderstanding of the modern spirit of medicine constantly checks the little tentative advances of a more scientific treatment, and it is necessary that it should be generally understood how powerfully the various processes of the economy may be effected by the manipulation of the conditions of common life."

But these are encouraging words from the *Medical World*, of New York:

"The time is fast approaching when hygienic and preventive medicine must supersede in great degree the methods of the old healing art. Less credit given to drugs results in greater reliance on measures that render them unnecessary. And thus a knowledge of limitation becomes an increase of power."

Miss R.: I think Joey Hayard would be a girl "after your own heart." I find this in an old *Atlantic Monthly:*

"Joey Hayard lived across the bay, in the town of Netherby—a shy but saucy bit of maidenhood, some twenty summers old. The doctor's steps were bent toward Joey's house, as it was to her mother, an old townswoman, he had been summoned; he was late, and perhaps he had been misled, and so Joey had been sent after him.

"The doctor first met her as she was coming down the hill, and asked her, 'Can you tell me where I may find the Widow Hayard's house?'

"'Are you the doctor?'

"'Yes,' was the reply. 'Are you looking for me?'

"'Yes, I am Joey Hayard.'

"'So I thought. Mrs. Hayard is ill, I hear.'

"'Mother's about as usual. Only she heard you were in town and thought she'd like to see you. Mother's from your place, sir. People from your place,' said Joey, with a frightened look aside, at her own audacity, 'think you made them!'

"'You don't think so, Miss Joey,' said the doctor.

"'Oh, no, no! I think you made their diseases. When I practice—'

"'Well, my little rival—'

"'I shall leave phials of cold water—twenty drops every eight hours—to be measured precisely, as twenty-five drops would occasion spasms. All my patients would get well.'

"'You would starve to death, Dr. Joey.'

"'No, indeed,' answered Joey, having surveyed the doctor, and collected a heart full of courage. 'The College of Surgeons would come to me, and they would say: '"Now, Dr. Joey, really, this will never do. Here we had quite an interesting region of aches and ills,—typhoid had the run of it, all the influenzas settled into charming consumptions, all the indigestions became gastric fevers, every pain in the side grew to pleurisy,—and you came and brought chaos into our order, and ruined the apothecaries, and beggared the grave-diggers, and have got things to such a pass that all the rest of the world have to stay fifteen days in quarantine before they come into Netherby. Such a state of health positively vulgarizes a community. Isn't it time, we ask you, that senna, and manna, and colchicum, and nauseousness had their turn? You really must feel the fatigue of such a work; and now—what will you take to retire?"'

"'Very well, Dr. Joey. As a brother physician may I request your treatment of a bad headache?'

"'I go to sleep without my supper,' said Joey.

"'And if it does not answer?'

"'Forego my breakfast.'

"'That failing?'

"'Dinner remains to be sacrificed, sir. Ah, sir,—I suppose you think one may as well die by the sword as the famine! Then I should send for you.'"

Julia: Joey's giving up eating while suffering from headache reminds me of what Dr. T. R. Allinson, L. R. C. P., etc., says of

THE FOOD CURE.

"The food cure of diseases has attracted the attention of all who have professed the healing art from all ages. In the early days of physic, before the body had been dissected, and before the chemistry of the tissues had been worked out, food, exercise, and bathing were the only remedies known. Now, though we know a great deal more of the actual state of affairs, yet our curative statistics are little more advanced than they were in those days. We may be able to remove a limb with greater expedition and practically without pain, and our operative modes are made simpler and more certain, yet in the pure cure of disease we are very little forward.

"Mankind has run after specifics for every ailment, and never thought of the cause of it: the result is that for every ailment there are numerous remedies, none of which are of any use. By running the gauntlet of these remedies on a disease, time is lost—if not the patient, too—and the medical man, being on the wrong track, does not find out his mistake. An old doctor said, 'When he began practice he had twenty remedies for every disease, when he finished he had twenty diseases and no remedy.' This search after specifics for every disease misleads and deludes the physician, and only after a life spent in weary research does he find out his error and repent his want of knowledge sooner.

"By the diet cure we first try and find out what is wrong, and remedy it. If too much food or food of the wrong kind has been used, we recommend less in quantity or correct the error in kind. Then, by means of baths and exercise, we remove the waste material already in the system, and so start it going again. We can prove from certain data that at least seven-tenths of our ailments and diseases are produced by our

food being improper either in quantity or quality. The probability of our taking too little food is rare, as the system soon makes its wants known. But the taking of too much food is one of the commonest errors which we are acquainted with; the many sauces and spices, the flavors and condiments, and the art of cookery make eating such a pleasure that we hardly ever know when to cry 'hold' at the right moment. All our feeding circumstances are such as to cause us to eat more than is good for us. Suppose we eat the right kind of food, but take too much in quantity only, then we tax our excretory organs unnecessarily and wear out before our time. The excessive aliment may remain in the system as fat, we become stout, the vital organs become burdened with it, we become less active, and life does not go on so happily as it should. If we load our systems with wrong kinds of food, or with too large a quantity of proper food, then disease is set up. Superabundant carbonaceous foods may give rise to obesity, certain forms of calculi, and even pains of a rheumatic kind; while excess of nitrogenous foods gives rise to rheumatism, gout, biliary and vesical calculi, and like diseases. The kidneys become blocked up, the heart's action is increased, the lungs get overworked, and the whole system has to exert itself to get rid of waste material. The system can only rid itself of a certain amount daily; when too much food is taken the superfluous material accumulates in the system. Some slight cause, as a chill or exposure to a draught, sets up diseased action, and the natural balance of healthy action is upset. The appetite fails, a feverish state is induced, and the system gets rid of its waste material by a profuse perspiration or purgation, and order is once more restored. In some cases the diseased condition is kept up, and the disease becomes chronic.

"A flesh diet has more tendency, all things being equal, to produce disease than a non-flesh one. Man is best fitted structurally for a vegetable diet. If we eat flesh we must suffer; the more flesh we consume the more disease must we have. Flesh is too thoroughly digested in man, the stomach having nearly all the work of digestion to do; hence the number of cases of indigestion, dyspepsia, catarrh of the stomach and bowels, and even acute inflammation, amongst mixed feeders,

over the vegetarian. The flesh once in the system then taxes the excretory organs to get rid of it; the liver, kidneys, lungs, and skin become overworked and diseased in consequence. If the flesh is continued in, these organs cannot get through the work imposed on them, and the waste material is retained in the system. This gives rise to gout and rheumatism, biliary and vesical calculi; kidney diseases are generated; the blood-vessels become degenerated, and apoplexy may result. Minor results may follow—as eczema, congestion of the liver, etc.; wounds heal slowly, and in the lower limbs chronic ulcers may form.

"This waste material in the system favors the attacks of zymotic or contagious diseases. These complaints are more common than need be, and always attack the ill-conditioned. Cancer, consumption, and other fatal diseases are more rife than need be, and we sink into an early grave."

Mrs. Mann: Food reform and drink reform go hand in hand; and medical reform underlies the whole. How, in the face of such evidence as is given by scientific experiment at this day, any lay person even, to say nothing of the physician, can look favorably upon the use of alcohol in any form, is a mystery. The *London Alliance News* has this little gem bearing upon the use of alcohol:

"Dr. Ridge took bacteria, putting some into glasses of cold water and a certain quantity of alcohol. He found that the alcohol greatly assisted the growth of the bacteria.

"The action of bacteria upon the tissues is of a very destructive nature, and not constructive; and alcohol is of the series of destructive agents, and aids the action of bacteria.

"So when a man exposed to the infection of typhus fever or cholera takes a little brandy, instead of the alcohol enabling him better to resist the infection, it actually prepares the soil for the development of the dangerous organisms."

Julia: Let me read this from the *New York Graphic:*

A Medical Catechism.

"*Patient:* Now, doctor, how would you define 'medical science'?

"*Doctor:* Well, medical science sometimes consists in making a person think he's very sick when he isn't, and at other times it tells people there isn't much the matter with them when they are half dead. Sometimes all this depends on the size of the patient's pocket-book. That in medicine is a very important and vital organ. The great aim, however, in my experience, is to have as many folks sick as possible, and to keep them sick.

"*Patient:* What is your idea as to the naming of diseases?

"*Doctor:* To change the name at least once in ten years.

"*Patient:* Why?

"*Doctor:* Because old names, such as 'croup,' 'lung fever,' etc., get too common. People are too apt to find out how to treat such diseases themselves. But when we clap a Latin name on the old complaint it mystifies the public, scares them, and sets them all adrift again. There'd be millions of dollars lost to the medical profession if we didn't change the names of our complaints occasionally.

"*Patient:* Suppose a well-to-do person is a little out of sorts, and comes to you with the idea that something very serious is the matter with him, what will you do?

"*Doctor:* This affords me some of my best-paying practice. In such cases I 'break up the disease.' I tell him that he is seriously threatened with something awful in Greek or Latin, composed of two words, seven or eight syllables, and one hyphen. Then I put him on a course of harmless drugs, to be taken at regular intervals of two hours. I put him also on a strict system of diet, and keep him in bed. It requires about a week to 'break up the disease.' Such prevention is better than immediate cure. It pays better, too.

"*Patient:* When you are called in, and are yourself uncertain as to the nature of the patient's sickness, what do you say to his inquiring friends or family?

"*Doctor:* The proper course in all such cases is to look wise and grave, and say as little as possible. We leave some medicine, of course. How can one be a doctor unless he always gives medicine? The medicine quiets the patient's mind and those of his friends. Patients, to tell the truth, are as bad as the doctors in this respect. They will insist on having some

medicine when they do not need it. But it never pays for a doctor to talk much.

"*Patient:* If you are called in after the sick person has been for several days previous in the care of another physician, and the patient dies, what is your course?

"*Doctor:* Invariably to regret to particular friends, in a subdued manner, at the proper times and places, that I had not been called in before the disease had made such headway.

"*Patient:* Do you not think in many cases of sickness that nature, aided by plenty of rest and good nursing, would effect a cure?

"*Doctor:* We do not encourage nature in such practices. It would ruin the profession.

"*Patient:* Now, if you treat a patient for you don't exactly know what, and he recovers, don't you take all the credit for such recovery?

"*Doctor:* Sir, that is a professional secret.

"*Patient:* Can you tell me, doctor, why it is that an expensive office, a horse and carriage, and a residence in the fashionable quarter, are practically considered as of as much, if not more, importance to a doctor than his skill or experience in his art, and that a doctor without the capital to set himself up in this manner, be his skill ever so great, can never hope to obtain a fashionable practice?

"*Doctor:* Certainly I can. It's custom and stupidity. But stupidity makes money for us. Are we going to try and cure stupidity—kill the goose that lays for us golden eggs? Never!

"*Patient:* Who are the most permanent and lucrative patients?

"*Doctor:* Women.

"*Patient:* Why?

"*Doctor:* Well, I think sometimes they had rather be sick and under a doctor's supervision than not. Another reason is, they are more perverse than men in clinging to the causes of their ailments. A man better realizes that without health he cannot carry on his business. So that when he finds out the cause of disease he'll set to work to stop it. Tell a man he needs more fresh air, and he'll try and get it. Tell him he needs more out-door exercise, and he'll try and take it. But

most women won't. They squeeze themselves into corsets, and insist on being cured of ills caused by corsets with pills. They'll go out in cold, damp weather, in costumes which show off their figures and without cloaks, when the cold drives all the blood from their skin, for hours. They'll insist on being cured by doctors and pills. They'll wear tight shoes, which deform and pain their feet, and this pain drawing indirectly from their strength — they'll insist on being cured with more pills. Nor is this all. But I shall tell no more. It is giving the 'profession' away. These things involve our most lucrative secrets. I shan't be thanked now by thousands of brother nurses of disease for what I have told."

Mrs. B.: I want to know what disease is, and how to care for my children, how to treat their ailments without having to send for the doctor; so many little ones die even under the care of physicians, it comes to me now, having buried four precious children, that mothers, if rightly informed, may be physician to their own little ones.

Viola: I have something just to the point, by Z. P. Glass, M. D., entitled

"What is Disease?

"Webster and Worcester say, first, lack of ease, uneasy, distress, trouble. Dr. Watson, in his Practice of Physic, when speaking on this subject, giving his lectures to students, says: 'I wish you to get into the habit of contemplating the whole science of medicine under its simplest and plainest form.' Good! Dr. Watson, it is the spinning out of long stories that obscures and almost hides what we are trying to explain. Now I wish to answer the question at the head of this article, and make it so plain that he that runs may read and understand. I shall not attempt to enumerate the causes of disease, they are legion, but what I wish to do is to explain very briefly what is going on in the vital system when the manifestations called disease are present. Dr. R. T. Trall says, 'disease is not, as is commonly supposed, an enemy at war with the vital forces,' but it is a war of the vital system itself against the causes that have provoked the war (disease). So long as the causes exist the war (disease) should continue. Causes must be removed, and

this action called disease is the struggle of the vital system for their removal; if the causes are too great to be overcome, vitality fights till death ensues. Can the physician help nature in the expulsion of causes?— this house-cleaning, so to speak? Truly remedial agents are materials and influences which have normal relations to the vital organs, and not drugs or poisons, whose relations are abnormal and anti-vital. Disease is an action of the vital system to cast out intruders—morbid matters—an action to be aided, regulated, and directed; it is not an enemy to be destroyed, but the best friend we can have under the circumstances. It is a war of vitality for the ejectment of the causes; let the war go on until causes are removed. The true physician can be the general, regulating and directing the fight, he can assist nature by supplying her needs, implements, etc., to carry the war to a glorious peace. This war in the vital domain is like war anywhere, it causes great uneasiness, discomfort, the patient feels as though no good could come of it, but be assured it is the best thing for us under the circumstances. Happy is the man who can say with Paul: 'Whom the Lord loveth He chasteneth.' 'If you endure chastening God dealeth with you as with sons. Now, no chastening for the present seemeth to be joyous, but grievous, nevertheless afterwards it yieldeth peaceable fruits, unto them that are exercised thereby.' In other words, when we get sick we must know that physical house-cleaning has commenced, and we must be cheerful and patient, and place ourselves in right relations to the war (disease), and hope for the best results—not doubt, fret, or despond. *Nor take drugs.*"

Doctor: Keep this ever in mind, that treatment is not as "when Greek meets Greek," a war of opposing forces, but an act of obedience to the requirements of a Superior Power, of which we are only an instrument; for, "It is God who healeth our diseases and redeemeth our lives from destruction."

See how infinitesimally small the power *we* have! Why, then, hesitate to relate ourselves *rightly* to the source of all power? To the side of the true and real, not the false and unreal.

Viola: Dr. Evans says, "God has managed, and perpetually manages, to insert into our nature a tendency toward

health, and against the *unnatural* condition which we call disease. When our flesh receives a wound, a strange nursing and healing process is immediately commenced to repair the injury. So in all diseases, organic or functional.

THIS MYSTERIOUS HEALING POWER—

the *vis medicatrix naturæ*—sets itself to work at once to triumph over the morbid condition.

"In consequence of this indwelling of God, the common Life of the universe, in us, recuperation is natural to the human body and to all living things. There is a divine energy inherent in the system that immediately and with omniscient skill reacts against every disorder of mind or body, and exhibits itself in a psychical and physiological effort to restore harmony. When a crumb of bread enters the trachea or wind-pipe, with what divine violence all the muscles that expel the air from the lungs contract to blow it out. This spasmodic action of the abdominal muscles and the diaphragm is not a disease, but is a curative effort of the organism to cast out a foreign and deleterious substance from the lungs.

"When a speck of dust or a grain of sand enters the eye, the lachrymal glands are stimulated to increased action, and the eye is suffused with a flood of tears to wash it out. In the case of poison or unwholesome food in the stomach, the first effort of the divine life, or what we call nature, is to induce nausea and vomiting. The action of the stomach is inverted so as to eject its injurious contents at once. If this does not succeed, the next resort of the divine healing energy is to increase the peristaltic action and vermicular movement of the stomach and intestinal canal, so as to rid the system of it as soon as possible by a diarrhœtic discharge."

Mrs. B.: I shall take up this line of thought and make it of practical use. Plainly its leadings are directly toward what you hygienists term

THE TRUE HEALING ART.

Methods are taught very easily after principles are understood. But I have so often tried to ignore the body, and treat it as a "thing of naught," that—

Viola: Oh, that is not the way Christ did. "He sought to impress his hearers with the importance of their bodies, so also did the apostles; miracles were wrought upon the body as well as the mind; a diseased, deformed body was nowise fitted to express the truths of such a religion as Christ came to teach — the religion of the *life* — of *doing*. He *lived*, and it was thus his influence over the hearts of the people became extensive as the race. It was in *hearts* that his kingdom was founded, and whoever will be his ambassador goes out with the commission, as of old, 'As ye go, heal the sick, cleanse the lepers, raise the dead, cast out devils.' This is true philanthropy, embodied not in words, but in deeds. It is the victory over disease and deformity which restores the body to a likeness of its 'first estate.' The Jews were instructed to respect and carefully secure the best bodily conditions, and surely when Christ came 'it was not to destroy but to fulfill.' Who can lightly consider the ultimate expression of a 'pure heart' when God taught His people that He would be worshiped with 'a pure heart' 'and clean hands,' expressing that close relationship between cleanliness and godliness which is recognized under the Christian dispensation."

Julia: I think Mrs. B. shares with numbers of women the longing for release from anxious care about her own health and the bodily conditions of those dependent upon her for love and attention. We get tired and impatient at the slowness of even the most effective methods.

Doctor: "Nature, that cunning and matchless workwoman, in some of her deepest and most significant processes, is slow; she cannot be hurried; the work can be done thoroughly in but one way. Deny time for that way, and the result is imperfect. It absolutely demands a certain length of time, varying according to circumstances, properly to knit a broken bone, to throw off an attack of pneumonia, to outgrow a given tendency to disease. No amount of impatience, of invective, of self-will, of revolt against nature, will result in anything but increasing, instead of lessening, the time. Who, naturally, is the best judge in this matter — the patient, ignorant of disease, almost necessarily partial in his own case, his judgment impaired by sickness, his action warped by morbid desire, or the physician,

impartial, cool, regarding the case scientifically, and equipped with all the knowledge on the subject that has been contributed for centuries by the race?"

This impatience is encountered by the physician because "Make haste slowly" is not understood by patient or friends, and imperfect cures are the result. The patient goes through life with some weakness, or incurable disability, simply because of undue haste to rush back into society, business, or home duties, when HEALTH of body, mind, and soul outweighs every other earthly consideration.

Mrs. Mann: How many obstacles exist preventing our ever reaching the fullness of possibility which even this life has for us!

Bad habits, prominent among which,

GUM-CHEWING

claims attention, are fastened and forged, and riveted, despite their unseemly and ungodly character. Gum-chewing is only a shade less harmful or disgusting than tobacco-chewing.

Doctor: Why this habit was ever formed can be answered only as we look at the wide problems of human life, and discover human beings busy in trying to work them out.

"Total depravity" claims its share, and I suppose these gum-chewers are self-appointed illustrations of that problem. It has been estimated that the people of the United States spend more than $1,500,000 every year for chewing-gum. One manufactory alone turns out five hundred thousand boxes, of six dozen cakes each, yearly, which is distributed all over the world.

Viola: And then think of all the other gum manufactories ambitious to flood the market with their goods. It is astonishing what the jaws of girls and women can do. But there is a sure and steady effect resulting from this practice. I read in a newspaper of a girl who chewed so steadily that her jaws became set, and a physician discovered that some of the muscles were paralyzed.

Mrs. E.: An eminent Ohio physician has declared that gum-chewing seriously affects the eyesight, and that he never fails to detect the use of it by an examination of the eye. An-

other says the muscles of the jaw and face near the temple are enlarged and hardened, and the curve of the lips is destroyed.

Doctor: There is neither use nor beauty in the habit, and it is certainly sure to undermine digestion, for the perpetual service of those salivary glands frustrates the design of nature, which we know is to make insalivation of our food the first step in good digestion. Weakness and deteriorated quality of secretion must result from the constant activity of the glands, hence digestion is less perfect. And this is proved to be a masterful practice, concluded not in itself, but reaching out to indulgence in articles of more stimulating nature than is simple gum.

Miss Flora: I was quick enough to give up gum-chewing when it was told me how injurious and disgusting it is. Before that it seemed innocent, in fact I never asked myself, Why do I chew gum? Many are doing the same, and as thoughtlessly. But it is not easy to quit. I long for it now; and am convinced by this fact, if no other, that I should not continue the practice.

Miss P.: The "coming woman" will not chew gum, nor will she be a victim to the

MORPHINE HABIT.

Dr. H. H. Rane, of New York, says in his valuable book,

"DRUGS THAT ENSLAVE,"

"Females are more frequent victims of the morphine habit than males, in the proportion of three to one." The physician "finding pain, nervousness, and hysteria constantly claiming attention, and nothing relieving them so well as opium, or its alkaloid, morphia, which is six times the parent strength, resorts to their use more and more freely." "The number of victims to this slavery is daily on the increase, both in town and country. Moreover, nervous affections are on the increase: pain without any very apparent cause, nervousness from the most trivial things. Insanity also. Suicide is daily more frequent.

"Those unacquainted with the truth in this matter will be surprised to learn that there are to-day thousands of educated

and respectable people, slaves to a habit that is more exacting than the hardest task-master, that they loathe beyond all else, and yet that binds them in chains that they are wholly unable to break. Each day, each hour, each minute binds them more firmly, until at last they feel themselves unable to cope with the demon that has overpowered them, and abandon themselves hopelessly, listlessly, to the vice. Each dose must be a little larger than the preceding, in order to obtain the desired effect. Of late years physicians are becoming more and more addicted to the subcutaneous use of morphine, and, as a consequence, the number of persons who habitually use the drug in this way is daily on the increase. The danger of forming the habit from the use of the drug in this way is undoubted. Correspondents, physicians from all parts of this country, England, and France assert this, and detail cases."

Doctor: We might notice other abnormalities which afflict society to-day, but they are mere shadows, destined to disappear as the light of truth is admitted into human souls.

To dissipate these shadows is the work of

DEVELOPED, BANDED WOMANHOOD.

It reaches up to heaven; descends to the depths of hell; following closely in the footsteps of its Lord and Saviour. The blessed words, "Lo! I am with you always," sound through every chamber of the soul, giving inspiration, courage, hope.

The divine flame of everlasting love enlightens, warms, vivifies, and health, harmony, happiness prevail throughout the brightening days of this glorious awakening to light and life.

All human souls are affected; some, perhaps, to cry "A little more sleep, a little more slumber, a little more folding of the hands to sleep." Yet many are so attracted and led to the sacred presence of Truth, that no toil or self-denial is thought too much, if the attainment of that height and breadth and depth of soul is reached which gives unlimited reception of the inflowing divine Life. "They shall be abundantly satisfied; and thou shalt make them drink of the river of thy pleasures.

"For with thee is the fountain of life:
In thy light shall we see light."

GLOSSARY.

ABDOMEN: The portion of the cavity of the trunk below the chest and above the pelvis.

ABORTIVE: Immature, ineffectual.

AERIFORM: Having the form of air or gas.

ALTERATIVE: An uncertain agent considered to be capable of producing a salutary change in the disease.

AMŒNA: An animalcule; a vital object consisting of a single cell, which changes its form freely in the medium from which it derives its nutrition.

AMORPHOUS: Having no determinate form.

ANÆMIA: Bloodlessness; want of red corpuscles in the blood; debility.

ANÆSTHESIA: A condition of insensibility produced by chloroform or some other agent.

ANTEFLEXION: Bending forward of the body of the uterus.

AREOLAR: Pertaining to small spaces or interstices.

ASSIMILATION: The act by which vital parts appropriate nourishment, and transform matter into their own substance.

AUTOMATIC: Spontaneous; that which acts of itself.

BUTYRIC ACID: An acid found in butter; an oily, limpid fluid having the smell of rancid butter, and an acrid taste; it is poisonous, and is developed in rancid butter, and in fresh butter when heat is applied to it.

CALCULUS: Any hard, solid concretion formed in any part of the body, but most frequent in the organs that are reservoirs and in the excretory canals.

CAPILLARIES: The minute blood-vessels between the arteries and veins, from which nutrition of vital parts is derived.

CATAMENIA: Menstrual discharge.

CATARRH: Fluid discharge from any membrane; as bowel, nostrils, urethra, etc.

CATENA: A series of things connected with each other.

CATHARSIS: The purgation of the bowels.

CELL: A closed sack, usually microscopic in size.

CELLULITIS: Inflammation of parts composed chiefly of cells.

CEREBELLUM: The lower part of the brain; it presides over the co-ordination of the voluntary movements.

CEREBRUM: The upper portion of the brain; the seat of the reasoning faculties.

CERVIX: A neck.

CHEST: The upper part of the trunk.
CHYLE: That portion of digested and absorbed food conveyed by the lacteals.
CILIA: Minute, hair-like appendages of surface cells, endowed with rapid, vibratory motion.
COLLAPSE: Prostration of the vital powers.
COMA: Profound insensibility.
CONATUS: An attempt or effort.
CONCOMITANT: Accompanying.
CONGENITAL: From birth.
CONGERIES: A combination.
CONGESTION: Accumulation of blood in an organ. A chronic state may result from an extraordinary flow of blood by arteries, or from difficulty in the return of blood to the heart by veins, more often the latter.
CONNECTIVE TISSUE: A fine, interlacing, elastic network which pervades the body, and mechanically binds other tissues into organs, and is in condensed form in the skin, membranes, tendons, etc.
CORRELATION: Reciprocal or mutual relation.

DEPLETION: Emptying, unloading.
DEPURATING: Purifying.
DESQUAMATION: Separation of the epidermis or scarf skin in the form of scales. It is a common result of eruptive fevers; as scarlatina, erysipelas, etc., measles.
DETERGENT: Cleansing.
DIAGNOSIS: Distinguishing diseases from each other.
DIAPHORESIS: Cutaneous evacuation.
DIAPHRAGM: The broad, thin breathing muscle between the chest and the abdomen, attached to the lower borders of the ribs.
DIETETICS: That part of medicine which relates to diet.
DIFFERENTIATE: To distinguish a thing by giving its specific difference.
DIURESIS: Copious urinary secretion.
DYNAMICS: Science of moving forces.
DYSURIA: Difficult urination.

ELIMINATORY: Separating, expelling.
EMENAGOGUES: Drugs that are meant to arouse the uterus specifically.
EMESIS: Vomiting.
EMPIRICAL: Founded on experience.
ENDEMIC: Diseases are called endemic when they prevail in a given locality, or district, or neighborhood; epidemic when they extend over several districts or neighborhoods, and sporadic when they appear in isolated cases.
ENEMA: Injections into the rectum.
ENERVATING: Weakening.
ENDOSMOSE: The transmission of a fluid or gas from without inward.
ENTERITIS: Inflammation of the intestines.

EPIGASTRIUM: The center region of the upper part of the abdomen.
ETIOLOGY: The doctrine of causes.
EXACERBATIONS: An increase or aggravation of symptoms.
EXOSMOSE: The passage of a gas or fluid from within outward.

FALLOPIAN TUBES: Two canals, one extending from each upper portion of the womb.
FECAL: Relating to excrement.
FLACCID: Soft, flabby, weak, or unused.
FLATULENCE: Wind; accumulation of gases in the alimentary canal.
FOMENTATION: The act of applying warm lotions for the purpose of easing pain by relaxing the skin or of discussing tumors.
FOMENTATIONS: Warm lotions applied for the purpose of easing pain, by relaxing the skin, or of discussing tumors.
FUNDUS: The base of any organ that ends in a neck.

GANGLION: Knot, or enlargement in the course of a nerve.
GASTRALGIA: Impaired appetite, with gnawing or burning pain in the stomach.
GASTRIC: Belonging or relating to the stomach.
GASTRODYNIA: A gnawing or burning sensation in the stomach or epigastric region; heartburn.
GESTATIVE: Carrying an embryo.
GRAVID: Pregnant.
GYNECOLOGY: That part of medical science and practice which relates to special diseases of women.

HEMIPLEGIA: Paralysis of one part of the body.
HEMORRHAGE: Any discharge of blood.
HEPATITIS: Inflammation of the liver.
HYDROCHLORIC: Compounded of hydrogen and chlorine.
HYPERÆMIA: A more than natural amount of blood in the capillaries.
HYPERTROPHIED: Abnormally increased in bulk.
HYPNOTISM: A kind of sleep said to be produced by means of animal magnetism.
HYPOCHONDRIA: A nervous affection characterized by melancholy.
HYPOGASTRIUM: The middle region of the lower part of the abdomen.
HYPOTHESIS: A supposition.
HYSTERIA: Manifestations of nervous irritability, largely emotional; the reflex muscular, the sensory powers, and the consciousness may be affected by its extreme degrees. It is not confined to the female, for irritable, nervous men are occasionally the subjects of it.

IMMOBILITY: Fixedness; incapable of being moved.
INCIPIENT: Beginning.
INDURATED: Hardened.
INFLAMMATION: An affection characterized by heat, pain, redness, and swelling; of which there are several varieties.

INGESTA: Substances introduced into the body by digestion, as food, condiments, drinks.

INNERVATION: Nervous influence necessary for the maintenance of life and the functions of the various organs.

INTERSTITIAL: Pertaining to the empty space between two things closely set.

LACTEALS: Vessels conveying chyle.

LETHEAN: Inducing forgetfulness.

LIGAMENT: A bandage; a band; fibrous tissue uniting bones.

LIGATURED: Bound.

LOTION: A fluid; external application.

LYMPH: The fluid of the lymphatic glands; fluid poured out in adhesive inflammation.

MALARIA: Foul air; air tainted by deleterious emanations from animal or vegetable matter.

MALPOSITION: Wrong or unnatural position.

MANIPULATION: Massage; motion with pressure applied to parts of the body in an orderly manner, with therapeutic intent. Transmission of energy to vital parts in the form of motion, which merges with and becomes auxiliary to physiological processes, and therefore to the vital powers. The two principal varieties are *manual* massage, when applied by the hands of skilled operators; and *mechanical* massage, in which the motions are transmitted by appropriate mechanism, from any suitable source of power. The latter has far larger scope as regards adjustability, variety, and extent of rates of motion, and therefore of the therapeutic effect produced. Massage, like most of the resources in medicine, is a true remedy only when properly prescribed and applied.

MENSES: Periodic discharge of blood from the uterus.

MESENTERY: The large fold of the peritoneum holding the small intestines in position.

METABOLISM: The act of producing the chemical changes of interior cells.

METAMORPHOSIS: Change of form; in pathology, the conversion of the constituents of the tissues into other material.

METASTASIS: Morbid change in the seat of the disease.

METRITIS: Inflammation of the womb.

MOLECULE: One of the invisible particles of matter.

MUCO-PURULENT: Having the character or appearance of mucus or pus.

MUCOUS MEMBRANE: The membrane lining all the cavities of the body that open externally and continue with the skin.

MULTIFORM: Having many forms.

NOSOLOGY: A systematic arrangement and classification of diseases.

NUTRITION: Those processes of absorbing matter by vital parts, and discharging it in changed form, by which the powers peculiar to vital objects are maintained.

OBFUSCATION: State of being darkened.
OBJECTIVE: Outward, extrinsic.
ORGANIC: Pertaining to or having organs.
OS: Mouth.
OXIDATION: Combining of oxygen with the body.
OVARY: The organs in the female where the ova or eggs are formed.

PALLIATIVE: Relieving, as pain.
PANARY: Pertaining to bread.
PARAPLEGIA: Paralysis of the lower half of the body.
PARTURITION: Delivery.
PATHOLOGY: The department of medical science which explains the nature and varieties of disease.
PELVIS: The cavity formed by the union of the heavy bones at the base of the trunk. It contains the bladder, lower end of the rectum, and the generative organs peculiar to each sex. This cavity is continuous with the abdominal.
PEPTIC: Promoting digestion.
PERICARDITIS: Inflammation of the pericardium.
PERIPHERY: The exterior, as the border of a circle.
PERISTALTIC: Contracting in wavy or worm-like motions.
PERITONEUM: The membrane lining the abdomen and pelvis, and covering their contents.
PERTURBATIONS: Disturbances, agitations.
PHTHISIS: Progressive emaciation of every part of the body.
PLACENTA: A soft, spongy, vascular body, adherent to the uterus and connected with the fetus by the umbilical cord.
PLASTIC: Capable of being moulded.
PLEXUS: Any network of vessels, nerves, or fibers.
PORTAL: Pertaining to the vein which conveys blood from the digestive organs, bearing a portion of the products of digestion to the liver.
PROPHYLACTIC: Preventive.
PROTEAN: Readily changing form or appearance.
PROXIMATE: Nearest.
PSYCHICAL: Relating to the soul.

RADICAL: Root; relating to the root or origin.
RECTUM: The last portion of the intestine.
REFLEX: Action derived from nervous incitation without necessary connection with consciousness; directed back.
REPLETION: Superabundant fullness.
RESOLUTION: Gradual disappearance of disease.
RESUMÉ: A summing up.
REVULSION: Action produced in some part to remove a morbid condition in some other organ or part; derivation.
ROSEOLA: A rose rash.

SANGUINEOUS: Abounding with blood.
SALINE: Containing some kind of salt.

SALIVATION: An inflammation of the mouth and salivary glands occasioned by mercurial or other poisons.
SCORBUTUS: Scurvy disease.
SCIRRHUS: A disease so called from a hardness which characterizes it.
SEQUELÆ: The consequences of a disease.
SERUM: Liquid portion of the blood.
SOLIDARITY: Consolidation of interests and responsibilities.
SORDES: A dark, sanious matter discharged from ulcers; also foul matters on the teeth in low, putrid fevers.
SPHINCTER: The circular muscle closing natural orifices.
STERNUM: The breast bone.
SUBJECTIVE: Pertaining to self.
SUBSULTUS: A starting, twitching, or convulsive motion.
SUPPURATION: Formation of pus.
SUSTENTATION: Mechanical support; holding up.
SUTURE: A tooth-like joint in the bones of the skull.
SYMPTOMATIC: That which is a symptom of some other affection.

TENDON: White fibrous tissue attaching muscle to bones.
TENESMUS: Frequent desire to evacuate the bowels, with pain.
THERAPEUTIC: Pertaining to the art of restoring health.
THERAPEUTICS: The treatment of disease.
TONIC: A medicine which the vital powers recognize and resist slowly, while a stimulant is recognized and resisted more promptly.
TOPICAL: Local.
TOXICAL: Poisonous.
TRACTION: Art of drawing, or state of being drawn.
TRAUMATIC: Anything relating to a wound.
TRUNK: The body, excepting the head and limbs.
TYMPANITIC: Relating to a flatulent distention of the abdomen, which sounds like a drum when struck.

UMBILICUS: The navel; the remains of the opening for the umbilical cord.
URETHRA: The excretory ducts for the urine in both sexes.
UTERUS: The womb.

VAGINA: The passage to the womb.
VARICOSE: Varix; enlarged or twisted condition of veins.
VASCULAR: Consisting of vessels, or containing them.
VENESECTION: Blood-letting; the operation of cutting a vein.
VESICLE: Bladder-like vessels.
VICARIOUS: Substituted; that which is done in place of another.
VILLI: Minute projections of the interior of the small intestines.
VIRUSED: Poisoned.
VISCERA: Any internal organ of the body; especially those of the abdomen, as the stomach, intestines, bowels.

ZYMOTIC: Effects of a diseased principle acting like a ferment in the system.

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